

SPECIFICATION AND CONTRACT DOCUMENTS
FOR THE
FULLWOOD ROAD IMPROVEMENTS PHASE II

FOR THE
PEACH COUNTY BOARD OF COMMISSIONERS
PEACH COUNTY, GEORGIA

APRIL 2021

RFB 21.002

PROJECT No. PCO 030



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Macon, Georgia 31210

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The Peach County Board of Commissioners will be accepting Sealed Bids pertaining to the Fullwood Road Improvements Phase II in Peach County, GA.

Closing date for Sealed Bids responding to Request for Bid (RFB) No. 21-002 shall be June 15, 2021 @ 2:30 p.m. Bids will be opened in public without discussion on June 15, 2021 @ 2:45 p.m. at the Peach County Board of Commissioner's Office, 213 Persons Street, Fort Valley, GA 31030. Bid amounts will not be released until the Board of Commissioners has awarded the project to the winning contractor.

A Pre-bid meeting will be held June 3, 2021 @ 9:30 a.m. at the Peach County Board of Commissioner's Office, 213 Persons Street, Fort Valley, GA 31030. Attendance at the pre-bid meeting is not required to submit a bid but is highly recommended.

The complete RFB package will be available by contacting Russell Wheeler at (478) 476-0700, rwheeler@tpointeng.com.

All bids must be accompanied by a Bid Bond in an amount not less than five percent (5%) of the Base Bid. Performance Bond and Payment Bond, each in the amount of one hundred percent (100%) of the contract amount, will be required of the successful bidder. Bond must be written by an acceptable Surety Company licensed to do business in the State of Georgia and listed with the Department of the Treasury.

Peach County reserves the right to reject all bids, to waive informalities, to re-advertise and/or to award any bid that is in the best interest of Peach County.

Mail or deliver Sealed Bids to:
Michaela Jones
Peach County Board of Commissioners
ATTN: RFB # 21-002
213 Persons Street
Fort Valley, GA 31030

Failure to submit all required data items identified within this section or submitting inaccurate information in your response may be cause for rejection as a Non-Responsive Bid. A Responsive Bid is a bid or proposal that conforms in all material respects to the requirements set forth in the invitation for bids.

1.01 INTENT

Peach County has an immediate need to hire a professional Contractor that can provide road improvement construction including minor fill, reestablishing ditches, road base installation and asphalt installation. It is the intent of this solicitation to engage qualified and experienced Contractor(s) that can provide road construction/resurfacing/maintenance at Fullwood Road in Peach County, Georgia. The Peach County Board of Commissioners intends to award a contract to one or more qualified companies that have extensive experience in this field. Peach County strongly encourages creative approaches.

1.02 GENERAL INSTRUCTIONS

1.02.1 Defined Terms: Terms used in these Instructions to Bidders are defined as follows:

- A. **Addenda** – Written or graphic instruments issued prior to the opening of Bids which clarify, correct, respond to questions, or change the bidding requirements in the proposed contract documents.
- B. **Bid** – The offer or proposal of a bidder submitted to the prescribed form setting forth the prices for the Work to be performed.
- C. **Bidder** - one who submits a bid directly to County, as distinct from a sub-bidder, who submits a bid to a Bidder.
- D. **Successful Bidder** - the lowest, qualified, responsible and responsive Bidder to whom County (on the basis of County’s evaluation as hereinafter provided) makes an award.
- E. **Bidding Documents** – Includes advertisement for bids, bidding requirements, instruction to bidders, proposed contract documents and all addenda.
- F. **Responsible Bidder** – A person or entity that has the capability in all respects to perform fully and reliably the contract requirements. This will be determined by the County as a bid proposal that has an aggregate score of 72 or greater as outlined in the evaluation criteria in the instructions to bidders.
- G. **Responsive Bidder** – A person or entity that has submitted a bid or proposal that conforms in all material respects (all requested information, documents, and certifications) to the requirements set forth in the invitation for bids.

1.02.2 Schedule: The Contractor, as a part of the bid, shall prepare and submit an Estimated Progress Schedule for the work. The progress schedule shall be related to the entire project to the extent required by the bid forms and shall provide for expeditious and practical execution of the work.

1.02.3 Contact Information: Bids shall clearly indicate the legal name, address, e-mail address, and business telephone number of the Contractor (company, firm, partnership, or individual).

1.02.4 Please provide the name, title, address, telephone number. E-mail address, and fax number of the individual(s) responsible for responding to this bid.

- 1.02.5 Expenses: All expenses for making this bid to Peach County are to be borne by the Contractor.
- 1.02.6 Examination of Contract Documents and Site: It is the responsibility of each Bidder before submitting a bid, to:
 - A. Examine the Contract Documents thoroughly
 - B. Visit the site to become familiar with local conditions that may affect cost, progress, performance or furnishing of the work.
 - C. Consider federal, state and local Laws and Regulations that may affect cost, progress, performance or furnishing of the work.
 - D. Study and carefully correlate Bidder's observations with the Contract documents and Notify County of all conflicts, errors or discrepancies in the Contract Documents.
- 1.02.7 Project Survey: Before submitting a bid, each Bidder will, at Bidder's own expense, make or obtain any additional examinations, investigations, explorations, tests and studies and obtain any additional information and data which pertain to the physical conditions (surface, subsurface and Underground Facilities) at or contiguous to the site or otherwise which may affect cost, progress, performance or furnishing of the work and which Bidder deems necessary to determine its bid for performing and furnishing the work in accordance with the time, price and other terms and conditions of the Contract Documents.
- 1.02.8 Temporary Storage: The land upon which the work is to be performed, and other lands designated for use by Contractor in performing the work are identified in the Contract Documents. All additional lands and access thereto required for temporary storage of materials and equipment are to be provided by Contractor.
- 1.02.9 Indemnification: The Contractor must agree to indemnify and to hold the County, its employees, and agents harmless from any and all claims for damages to persons and/or property arising out of or in any way connected with the performance by Contractor of any work, services, or functions contracted for.
- 1.02.10 The submission of a bid will constitute an incontrovertible representation by Bidder that without exception, the bid is premised upon performing and furnishing the work required by the Contract Documents and such means, methods, techniques, sequences or procedures of construction as may be indicated in or required by the Contract Documents, and that the Contract Documents are sufficient in scope and detail to indicate and convey understanding of all terms and conditions for performance and furnishing of the work.
- 1.02.11 Lobbying: All firms and their agents who intend to or have submitted responses to this solicitation are hereby placed on formal notice that lobbying of Peach County Government employees or members of the Evaluation Committee with the intent to manipulate the Procurement process may result in the immediate disqualification of such firm by the County from further consideration for this project.
- 1.02.12 Qualifications of Bidders: Peach County may make such investigations deemed necessary to determine the ability of the contractor to perform the work and ensure there is no conflict of interest as it relates to the project. The contractor shall furnish to the County any additional information and financial data for this purpose as the County may request. The data may include a detailed and up-to-date list of plant equipment and materials which contractor proposes to use, indicating which portions

they already possess and a detailed description of the method and program or work to be done.

- 1.02.13 Bidder Qualification Documentation: If, based on the documentation submitted with the bid, the Bidder does not demonstrate adequate qualifications; the County may disqualify the Bidder. The Bidder shall possess the financial capacity to pay for the expenses associated with this project prior to the initial payment and between subsequent payments, as well as the ability to provide the necessary insurance. The Bidder shall have an experienced management team, an established network of resources to provide the necessary equipment and personnel, to complete the Fullwood Road Improvements – Phase II. To demonstrate qualifications to perform the work, each Bidder must submit with the bid the following information.
- A. Financial and Corporate:
 - 1. Documentation of Bankruptcy within last 7 years. If none state so.
 - 2. Verification that the name of firm has not changed in the last five years. If the name of firm has changed in the last five years, provide an explanation. If no name change, please state so.
 - 3. List of construction equipment available for use on the project
 - 4. List of personnel (by position not name) that will be assigned to this project.
 - 5. Certificate(s) of insurance showing that the company has adequate Liability, Auto Liability, and Workers Compensation insurance to meet the requirements of this RFB.
 - B. Safety: Occupational Safety and Health Administration (OSHA) 300 Log for the past 24 months.
 - C. References: Provide a list of at least three (3) current professional references for whom comparable work has been performed. This list shall include company name, person to contact, address, and telephone number.
 - D. Experience:
 - 1. Project information from at least three comparable (cost, scope of work) projects over the last five years. Provide scope of work, Contract completion date, Contract amount and County's name and contact information.
 - 2. Litigation history for the last 7 years. If none, so state.
 - 3. County's name and contact information.
 - 4. Detailed description and plan of operation that indicates the planned operations and proposed timetable to complete all project requirements.
 - 5. Qualifications of project manager, superintendent, and subcontractors who will be involved with the project.
 - 6. List of Subcontractors. If none, so state.
- 1.02.14 Suspension or Debarment: The Bidder nor its principals must not be presently debarred, suspended, proposed for disbarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal or state of Georgia department or agency. Prime Contractors or Subcontractors that have been debarred or suspended will be disqualified.
- 1.02.15 Rejection of Response: The Peach County BOC in its absolute discretion, may reject any response of a bidder that has failed, in the opinion of the Board, to complete or

perform a Peach County contracted project in a timely fashion or has failed in any other way, in the opinion of the Board, to perform a prior contract in a satisfactory manner, and has directed the Peach County Purchasing Manager to emphasize this condition to potential bidders.

- 1.02.16 Subcontractors and Suppliers Qualifications: County may consider the qualifications and experience of subcontractors, suppliers, and other persons and organizations proposed for those portions of the work as to which the identity of subcontractors, suppliers, and other persons and organizations must be submitted as provided in the invitation for bids. County also may consider the operating costs, maintenance requirements, performance data and guarantees of major items of materials and equipment proposed for incorporation in the work when such data is required to be submitted prior to the Notice of Award. County may conduct such investigations as it deems necessary to assist in the evaluation of any bid and to establish the responsibility, qualifications and financial ability of Bidders, proposed Subcontractors, Suppliers and other persons and organizations to perform and furnish the work in accordance with the Contract Documents to County's satisfaction.
- 1.02.17 Proprietary Information: Careful consideration should be given before submitting confidential information to Peach County. The Georgia Open Records Act permits public scrutiny of most materials collected as part of this process. Please clearly mark any information that is considered a trade secret, as defined by the Georgia Trade Secrets Act of 1990, O.C.G.A. §10-1-760 et seq., as trade secrets are exempt from disclosure under the Open Records Act. Peach County does not guarantee the confidentiality of any information not clearly marked as a trade secret.
- 1.02.18 Liability: The successful Bidder shall act as an independent Contractor and not as an employee of Peach County. The successful Bidder will be required to indemnify, defend, and hold and save harmless Peach County, its officers, agents, and employees, from damages arising from the performance of, or the failure to perform, any Work or duty required to be performed by the successful proposer.
- 1.02.19 Rights of County: Peach County reserves the right to retain all bids submitted and to use any ideas in a bid, regardless of whether that bid is selected. The County reserves the right to accept or reject all or any part of any bid. The County reserves the right to add or delete from the contract after the contract has been awarded.
- 1.02.20 Addendum and Supplement to Request: If it becomes necessary to revise any part of the RFB, or if additional data are necessary to enable an exact interpretation of provisions of the RFB, an addendum will be issued. It is the responsibility of the party submitting the Bid to ensure that they have received all addenda prior to submitting a bid. **All addenda must be initialed and attached to the bid.** *Failure to include addenda may be ample cause for rejection of the bid as non-responsive.* Addenda will be published on the Peach County web site www.peachcounty.net.
- 1.02.21 Questions and Inquiries:
- A. The county will recognize only communications that are in writing and signed. The County shall not be responsible for oral interpretations given by any County employee, representative, or others. The issuance of an addendum is the only official method whereby interpretation, clarification, or additional information can be given.

- B. Should a Bidder find any discrepancies in the Drawings and Specifications, or should he be in doubt as to their meaning, he/she shall notify the Owner's Representative at once, who will send a written Addendum to all Bidders concerned. Oral instructions or decisions, unless confirmed by Addenda, will not be considered valid, legal or binding.
- C. Written questions and inquiries will be accepted from any and all contractors or firms planning on submitting a bid. Inquires pertaining to the RFB must give firm or contractor name, RFB number, title, and acceptance date. Material questions will be answered in writing and communicated in an addendum, provided that all questions are received at least five (5) days in advance of the bid acceptance date. All written questions shall be directed to:

Michaela Jones, County Administrator
213 Persons Street
Fort Valley, GA 31030
Michaela-jones@peachcounty.net

1.03 BIDS

- 1.03.1 **Bid Forms:** All blanks in the Bid Forms must be completed, typed or printed in blue ink. Bids by corporations must be executed in the corporate name by the president or a vice-president (or other corporate officer accompanied by evidence of authority to sign) and the corporate seal must be affixed and attested by the secretary or an assistant secretary. The corporate address and state of incorporation must be shown below the signature. Bids by partnerships must be executed in the partnership name and signed by a partner, whose title must appear under the signature and the official address of the partnership must be shown below the signature. All names must be typed or printed below the signature. The bid shall contain an acknowledgement of receipt of all Addenda (the numbers of which must be filled in on the Bid Form).
- 1.03.2 **Submission of Bids:** Sealed bids must be received **BEFORE** June 15, 2021 @ 2:30 p.m.. Bids may be mailed, or hand delivered to Peach County Procurement Department, Attn. Michaela Jones, 213 Persons Street, Fort Valley, Georgia 31030. Bids shall be submitted and shall be enclosed in one opaque sealed package or envelope, marked with "RFB No. 21-002, Fullwood Road Improvements – Phase II" and name and address of the Bidder and accompanied by the bid security and other required documents. If the bid is sent through the mail or other delivery system, the sealed package shall be enclosed in a separate package or envelope with the notation "BID ENCLOSED" on the face of it.
- 1.03.3 **Bid Copies:** **One (1) original bid, three (3) copies of your bid, and one (1) complete electronic copy of your bid in Adobe .pdf format on a flash drive must be provided.**
- 1.03.4 **Binding of Bids:** All original and copies of bids shall be permanently bound. Bids submitted using spring loaded clips are not considered permanently bound. ***Bids not bound in a permanent method or in any way that individual sheets are not connected to adjacent sheets shall be considered Non-Responsive and will not be considered for evaluation.***

- 1.03.5 Late Bids: Bids received after the closing date and/or time will be returned to party submitting the bid unopened if the RFB number, acceptance date, and Contractor’s return address is shown on the package of envelope.
- 1.03.6 Opening of Bids: Following the opening of the sealed bids, the County will choose the successful bid in accordance with the following procedure: The County will first eliminate from consideration all bids that are not “responsive.” The County will then eliminate any bid to which the County does not assign an aggregate score of at least 72 under the criteria set forth in Paragraph 1.03.8 of the Instructions to Bidders. The County will deem all remaining bids to be responsive and responsible.
- 1.03.7 Bid Active Term: Bids to Remain Subject to Acceptance: All responsive and responsible bids will remain subject to acceptance for sixty (60) days after the day of the bid opening, but County may, in its sole discretion, and in accordance with Instruction to Bidders, release any bid and return the bid security prior to that date.
- 1.03.8 Bid Evaluation Criteria: The evaluation criteria to be used by the County to determine responsible Bidders (and the maximum points that the County may assign to each) in reviewing the sealed bids is as follows:

Factor	Evaluation Weight (Points)
Service Delivery Schedule	15
Company/Contractor Integrity	20
Record of Past Performance	20
Experience with Similar Work	17
Warranty	15
Financial Resources	10
Peach County Business Location	3

Following the opening of bids, the following procedure will be used to determine the successful bidder:

- A. The County will first eliminate from consideration all bids that are not “responsive” as such term is defined as “a bid or proposal that conforms in all material respects to the requirements set forth in the invitation for bids,” and will further eliminate any bid as “not responsible” to which the County does not assign an aggregate score of at least 72 under weighted evaluation factors set forth above.
- B. The County will deem all remaining bids to be responsive and responsible.
- 1.03.9 Bid Rejection: County reserves the right to reject any and all bids, to waive any and all informalities not involving price, time or changes in the work and to negotiate Contract terms with the Successful Bidder, and the right to disregard all nonconforming, non-responsive, unbalanced or conditional bids. Also, County reserves the right to reject the bid of any Bidder if County believes that it would not be in the best interest of the County, to make an award to that Bidder, whether the bid is not responsive, or the Bidder is unqualified or of doubtful financial ability or fails to meet any other pertinent standard or criteria established by County.
- 1.03.10 County reserves the right to negotiate with the apparent low Bidder including changes in the scope of work if the apparent low bid is greater than the project budget.
- 1.03.11 Mathematical Errors: Discrepancies in the multiplication of units of work and unit prices will be resolved in favor of the correct sum.

- 1.03.12 Dimensions and Elevations: Dimensions and elevations indicated on the drawings in reference to existing structures or utilities are the best available data obtainable but are not guaranteed by the County and the County will not be responsible for their accuracy.
- 1.03.13 Field Verification: Before proposing on any work dependent upon the data involved, the Contractor shall field check and verify all dimensions, grades, lines, levels or other conditions of limitations at the site to avoid construction errors.
- 1.03.14 The County reserves the right to waive any informalities or reject any and all bids, in whole or part, to utilize any applicable state contracts in lieu of or in addition to this bid and to accept the bid that in its judgment will best serve the interest of the County.
- 1.03.15 The Board specifically reserves the right to reject any conditional bid and will normally reject those that made it impossible to determine the true cost of the bid.
- 1.03.16 Bid Protests: Any Bidder or respondent, who is not the awarded Contractor, but is aggrieved in connection with the award of a Contract, may file a Notice of Protest, in writing, with the Board of Commissioners' Office, within seventy-two (72) hours after Board of Commission approval. Bid protests must be in accordance with the Peach County Procurement Manual. The decision of the County Commission is final.
- 1.03.17 Modification and Withdraw of Bids
- A. Bids may be modified or withdrawn by an appropriate document duly executed (in the manner that a bid must be executed) and delivered to the place where bids are to be submitted at any time prior to the opening of bids.
 - B. If, within twenty-four hours after bids are opened, any Bidder files a duly signed, written notice with County and promptly thereafter demonstrates to the reasonable satisfaction of County that there was a material and substantial mistake in the preparation of its bid, that Bidder may withdraw its bid and the bid security will be returned. Thereafter, that Bidder will be disqualified from further bidding on the work to be provided under the Contract Documents.

1.04 AWARD OF CONTRACTS

- 1.04.1 If the Contract is to be awarded, it will be awarded on the basis of the base bid to the lowest Bidder whose evaluation by County indicates to County that the award will be in the best interest of the County.
- 1.04.2 Notice of Award: If the Contract is to be awarded, County will give the Successful Bidder a written Notice of Award within sixty (60) days after the days of the bid opening.
- 1.04.3 The County reserves the right to award the Contract conditional upon funds being made available for such project.
- 1.04.4 County Obligation to Award: There is no obligation on the part of the County to award the project to the lowest bid price, and the County reserves the right to award the project to a Bidder submitting a bid response with a resulting negotiated agreement which is most advantageous and in the best interest of Peach County, and to reject any and all bids or to waive any irregularity or technicality in bids received. Peach County shall be the sole judge of the bid and the resulting negotiated agreement that is in its best interest and its decision shall be final.

- 1.04.5 The County reserves the right to utilize any, all, or none of the Contractors that are awarded pursuant to the County’s solicitation for the services contained in this Agreement.
- 1.04.6 **Signing the Agreement:** When County gives a Notice of Award to the Successful Bidder, it will be accompanied by the required number of unsigned counterparts of the Agreement with all other written Contract Documents attached. Within ten (10) days thereafter Contractor shall sign and deliver the required number of counterparts of the Agreement and attached documents to County with the required Bonds. Within ten (10) days thereafter, County shall deliver one fully signed counterpart to Contractor.
- 1.04.7 **Subcontractor Approval:** If the General or Supplementary Conditions require the identity of certain Subcontractors, Suppliers, and other persons and organizations (including those who are to furnish the principal items of material and equipment) to be submitted to County in advance of the specified date prior to the Effective Date of the Agreement, the apparent Successful Bidder, and any other Bidder so requested, shall within seven days after the bid opening, submit to County, a list of all such Subcontractors, Suppliers and other persons and organizations proposed for those portions of the work for which such identification is required. Such list shall be accompanied by an experience statement with pertinent information regarding similar projects and other evidence of qualification for each such Subcontractor, Supplier, person or organization if requested by County. If County after due investigation, has reasonable objection to any proposed Subcontractor, Supplier, other person or organization, either may before the Notice of Award is given request the apparent Successful Bidder to submit an acceptable substitute without an increase in bid price. If apparent Successful Bidder declines to make any such substitution, County may award the Contract to the next lowest Bidder that proposes to use acceptable Subcontractors, Suppliers and other persons and organizations. The declining to make requested substitutions will not constitute grounds for sacrificing the bid security of any Bidder. Any Subcontractor, Supplier, other person or organization listed and to whom County does not make written objection prior to the giving of the Notice of Award shall be deemed acceptable to County subject to revocation of such acceptance after the Effective Date of the Agreement. No Contractor shall be required to employ any Subcontractor, Supplier, other person or organization against whom Contractor has reasonable objection.

1.05 CERTIFICATIONS AND DOCUMENTATION

- 1.05.1 **Non-Segregated Facilities:** Bidders must certify that they do not and will not, maintain or provide for their employees any facilities that are segregated on a basis of race, color, creed or national origin. Execution of the “Certification of Non-Segregated Facilities” contained within these documents must be accomplished and submitted with the bid.
- 1.05.2 **Equal Opportunity:** The County recognizes fair and open competition as a basic tenet of public procurement and encourages participation by minority and women owned business enterprises. All proposers are asked to make an affirmative statement as to its support of all applicable equal opportunity and affirmative action requirements.

- 1.05.3 Certificate of Insurance: Bidder must submit with the Bid response one of more certificate(s) of insurance showing proof that the bidder has the following minimum insurance coverage:
- A. Minimum General Liability Insurance: \$2,000,000 aggregate, \$1,000,000 per occurrence
 - B. Minimum Automobile Liability Insurance: \$2,000,000 aggregate, \$1,000,000 per occurrence
 - C. Minimum Workers Compensation Insurance: \$500,000
- Bids not containing Certificate(s) of Insurance proving minimum insurance coverage will be considered “non-responsive” and may be rejected from consideration.
- 1.05.4 Required Submittal Documentation: Submit the following completed (Signed, Dated, and Notarized) documents with the bid. Bids not containing the following completed documents will be considered “non-responsive” and may be rejected from consideration.
- Form A: Peach County Vendor Information Sheet
 - Form B: W-9 (Taxpayer Identification Number)
 - Form C: Contractor E-Verify Affidavit under O.C.G.A. 13-10-91(b) (1)
 - Form D: S.A.V.E. Affidavit Verifying Status for County Public Benefit Application Contracts
 - Form E: Subcontractor E-Verify Affidavit under O.C.G.A. 13-10-91(b) (1) (Required for ALL Subcontractors working for the Contractor)
 - Form F: Sole Proprietor Exemption Affidavit Pursuant To O.C.G.A. 36-60-6(d), if applicable (Only if contractor has zero employees)
 - Form G: Certification by Contractor, Non-Segregated
 - Form H: Certification by Contractor, Drug-Free Workplace Act
 - Form I: Non-Collusion Affidavit or Prime Contractor
 - Form J: Conflict of Interest Certification
 - Form K: Indemnity Agreement
 - Form L: Title VI Civil Rights Act of 1964 Contractor Agreement
 - Form M: Debarred Bidders/Integrity Certification
 - Form O: Dispute Disclosure
 - Form P: List of Subcontractors

1.06 BID SECURITY

- 1.06.1 Each bid must be accompanied by bid security made payable to County in an amount of five percent (5%) of the Bidder’s maximum bid price and in the form of a certified or bank check or a Bid Bond issued by a surety meeting the requirements of Paragraph 5.0 of the Bonds Section of this RFB.
- 1.06.2 The bid security of the Successful Bidder will be retained until such Bidder has executed the Agreement and furnished the required Contract security, whereupon the bid security will be returned. If the Successful Bidder fails to execute and deliver the Agreement and furnish the required Contract security within ten (10) days after the Notice of Award, County may nullify the Notice of Award and the bid security of that Bidder will be forfeited. The bid security of other Bidders whom County believes to have a reasonable chance of receiving the award may be

retained by County until the earlier of the seventh (7) day after the Effective Date of the Agreement or the sixtieth (60) day after the bid opening, whereupon bid security furnished by such Bidders will be returned. Bid security with bids which are not competitive will be returned within seven days after the bid opening.

END OF SECTION

Bid proposal of _____
(hereinafter called "BIDDER"), organized and existing under the laws of the State of _____ doing business as _____ *. To Peach County Board of Commissioners (hereinafter called "OWNER"). In compliance with your Advertisement for BIDS, BIDDER hereby proposed to perform all WORK for the construction of Fullwood Road Improvements – Phase II in strict accordance with the CONTRACT DOCUMENTS, within the time set forth therein, and at the prices stated below.

By permission of this BID, each BIDDER certifies, and in the case of a joint BID each party thereto certifies as to his own organization, that this BID has been arrived at independently, without consultation, communication, or agreement as to any matter relating to this BID with any other BIDDER or with any competitor.

BIDDER hereby agrees to commence WORK under this contract on or before a date to be specified in the NOTICE TO PROCEED and to fully complete the PROJECT within 120 consecutive calendar days thereafter. BIDDER further agrees to pay as liquidated damages in the amount stated in the Section 00100-Instructions to Bidders (00100 No. 9) for each consecutive calendar day thereafter.

Bidder understands that the bid may not be withdrawn for a period of 60 calendar days after the bid opening date.

BIDDER acknowledges receipt of the following ADDENDA:

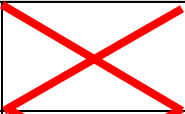

* Insert "a corporation", "a partnership", or "an individual" as applicable.

BIDDER agrees to perform all the work described in the CONTRACT DOCUMENTS for the following unit prices or lump sum:

BID SCHEDULE

NOTE: BIDS SHALL INCLUDE SALES TAX AND ALL OTHER APPLICABLE TAXES AND FEES.

ITEM 1 – GENERAL CONDITIONS					
a.	1	LS	General Conditions		
b.	1	LS	Mobilization		
c.	1	LS	Testing Allowance	\$15,000.00	\$15,000.00
ITEM 2 – SITE PREPARATION					
a.	1	LS	Demolition and Disposal (Exiting: Asphalt/Concrete Driveways, Driveway Culverts, Etc.)		
b.	477	LF	Remove, Relocate & Reset Fencing		
ITEM 3 - TRAFFIC CONTROL					
a.	1	LS	Traffic Control Complete		
ITEM 4 – EROSION AND SEDIMENT CONTROL					
a.	3	Ea.	Stabilized Construction Entrance		
b.	5.4	Ac.	Cleaning and Grubbing		
c.	2.75	Ac.	Grassing / Mulching		
d.	2,602	LF	Silt Fence Sediment Barrier		
e.	13	Ea.	Hay Bale Check Dam		
f.	19	Ea.	Rock Check Dam		
ITEM 5 – PAVEMENT, PAVEMENT MARKINGS, & SIGNS					
a.	3630	TN	5" GAB		
b.	1450	TN	2" Asphalt Surface Course (12.5mm SP)		
c.	3764	LF	Double Yellow Centerline		
d.	24	LF	24" Stop Bar (2 Stop bars)		
e.	2	Ea.	Stop Sign, Remove & Relocate		
ITEM 6 – Storm Drainage					
a.	142	LF	15" Reinforced Concrete Pipe (RCP)		
b.	40	LF	18" Reinforced Concrete Pipe (RCP)		
c.	129	LF	24" Reinforced Concrete Pipe (RCP)		
d.	16	LF	30" Reinforced Concrete Pipe (RCP)		
e.	20	Ea.	15" Concrete Flared End Section		
f.	6	Ea.	18" Concrete Flared End Section		
g.	10	Ea.	24" Concrete Flared End Section		
h.	2	Ea.	30" Concrete Flared End Section		
ITEM 7 - EARTHWORK					
a.	1,728	C.Y.	Earthwork (Cut, Fill and Haul)		

ITEM 8 – ADDITIONAL WORK IF REQUESTED BY OWNER					
a.		Ton	Stabilization Rock, in place & complete (Includes removal & disposal of unsuitable material).		
b.		Man-Hour	Coordination with utility companies for relocating existing utilities.		
c.	1	Ea.	Allowance	\$20,000.00	\$20,000.00

TOTAL BASE BID FOR ITEMS 1-7 & 8c. \$ _____

_____ (in words)

and _____ (dollars)

The Bidder declares an understanding that the quantities shown for unit price items are subject to either increase or decrease, and that should the quantities of any of the items of Work be increased, the Bidder proposes to do the additional Work at the unit prices stated herein; and should the quantities be decreased, the Bidder also understands that payment will be made on the basis of actual quantities at the unit price bid and will make no claim for additional costs or anticipated profits for any decrease in quantities; and that actual quantities will be determined upon completion of Work, at which time adjustment will be made to the Contract amount by direct increase or decrease.

In case of discrepancies between the figures shown in the unit prices and the totals, the unit prices shall apply, and the totals shall be corrected to agree with the unit prices. In case of discrepancies between written amounts and figures, written amounts shall take precedence over figures and the sum of all Bid extensions (of unit prices) plus lump sum items shall take precedence over BID TOTAL.

Bidder hereby acknowledges enclosure of the following qualifications information:

- Form A: Peach County Vendor Information Sheet
- Form B: W-9 (Taxpayer Identification Number)
- Form C: Contractor E-Verify Affidavit under O.C.G.A. 13-10-91(b) (1)
- Form D: S.A.V.E. Affidavit Verifying Status for County Public Benefit Application Contracts
- Form E: Subcontractor E-Verify Affidavit under O.C.G.A. 13-10-91(b) (1) (Required for ALL Subcontractors working for the Contractor)
- Form F: Sole Proprietor Exemption Affidavit Pursuant To O.C.G.A. 36-60-6(d), if applicable (Only if contractor has zero employees)

Form G:	Certification by Contractor, Non-Segregated
Form H:	Certification by Contractor, Drug-Free Workplace Act
Form I:	Non-Collusion Affidavit or Prime Contractor
Form J:	Conflict of Interest Certification
Form K:	Indemnity Agreement
Form L:	Title VI Civil Rights Act of 1964 Contractor Agreement
Form M:	Debarred Bidders/Integrity Certification
Form N:	Dispute Disclosure
Form O:	List of Subcontractors

Additional information to be submitted:

- Year-End Financial Statement Certified by CPA
- Documentation of Bankruptcy within last 7 years
- Explanation of name change within last 5 years (if applicable)
- Documentation of location of permanent office within 75 miles
- List of construction equipment available for use on the project
- OSHA 300 Log
- Project information from at least three comparable projects over the last five years
- Litigation history for the last 7 years
- List of Current Projects
- Qualifications of project manager, superintendent, and subcontractors who will be involved with the project.
- Certificate of Insurance: Bidder must submit with the Bid response one of more certificate(s) of insurance showing proof that the bidder has the following minimum insurance coverage:
 - Minimum General Liability Insurance: \$2,000,000 aggregate, \$1,000,000 per occurrence
 - Minimum Automobile Liability Insurance: \$2,000,000 aggregate, \$1,000,000 per occurrence
 - Minimum Workers Compensation Insurance: \$500,000
 - The Bidder furthermore agrees that, in the case of a failure to execute the Contract Agreement and Bonds within ten days after receipt of conformed Contract Documents for execution, the attached Bid Bond accompanying this Bid and the Monies payable thereon shall be paid into the funds of the Owner as liquidated damages for such failure.

(signatures on next page)

Respectfully submitted:

_____ Date: _____

Signature

Title

Company

Address

License Number

SEAL (if BID is by a corporation)

ATTEST: _____

KNOW ALL MEN BY THESE PRESENTS, that we, the undersigned,

as Principal, and _____
as Surety, are hereby held and firmly bound unto the Peach County Board of Commissioners as
OWNER in the penal sum of _____ for the
payment of which, well and truly to be made, we hereby jointly and severally bind ourselves,
successors and assigns.

Signed, this _____ day of _____, 2021.

The Condition of the above obligation is such that whereas the Principal has submitted to
_____ Peach County Board of Commissioners
_____ a certain BID, attached hereto and hereby made a part hereof, to enter into a contract in
writing, for the Fullwood Road Improvements – Phase II.

NOW, THEREFORE,

- (a) If said BID shall be rejected, or
- (b) If said BID shall be accepted and the Principal shall execute and deliver a contract
in the Form of Contract attached hereto (properly completed in accordance with said
BID) and shall furnish a BOND for his faithful performance of said contract, ,and
for the payment of all persons performing labor or furnishing materials in
connection therewith, and shall in all other respects perform the agreement created
by the acceptance of said BID, then this obligation shall be void, otherwise the same
shall remain in force and effect; it being expressly understood and agreed that the
liability of the Surety for any and all claims hereunder shall, in no event, exceed the
penal amount of this obligation as herein stated.

Section 00410
BID BOND

The Surety, for value received, hereby stipulates and agrees that the obligations of said Surety and its BOND shall be in no way impaired or affected by any extension of the time within which the OWNER may accept such BID; and said Surety does hereby waive notice of any such extension.

IN WITNESS WHEREOF, the Principal and the Surety have hereunto set their hands and seals, and such of them as are corporations have caused their corporate seals to be hereto affixed and these presents to be signed by their proper officers, the day and year first set forth above.

Principal (L.S.)

Surety

By: _____

IMPORTANT: Surety companies executing BONDS must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the State where the PROJECT is located.

This AGREEMENT made this _____ day of _____, 2021, by and between Peach County Board of Commissioners (hereinafter call “OWNER”), and _____, doing business as (an individual), or a partnership), or (a corporation) hereinafter called “CONTRACTOR”.

WITNESSETH: That for and in consideration of the payments and agreements hereinafter mentioned:

1. The CONTRACTOR will commence and complete the construction of the Fullwood Road Improvements – Phase II.
2. The CONTRACTOR will furnish all of the material, supplies, tools, equipment, labor and other services necessary for the construction and completion of the PROJECT described herein.
3. The CONTRACTOR will commence the work required by the CONTRACT DOCUMENTS within 14 calendar days after the date of the NOTICE TO PROCEED and will complete the same within 120 calendar days unless the period for completion is extended otherwise by the CONTRACT DOCUMENTS.
4. The CONTRACTOR agrees to perform all of the WORK described in the CONTRACT DOCUMENTS and comply with the terms therein for the sum of _____, as shown in the BIDS schedule.
5. The term ‘CONTRACT DOCUMENTS’ means and includes the following:
 - a. ADVERTISEMENT FOR BIDS
 - b. INSTRUCTIONS TO BIDDERS
 - c. BID
 - d. BID BOND
 - e. AGREEMENT

- f. PERFORMANCE BOND
- g. PAYMENT BOND
- h. CERTIFICATION OF OWNER’S ATTORNEY
- i. NOTICE OF AWARD
- j. NOTICE TO PROCEED
- k. CHANGE ORDER
- l. STANDARD GENERAL CONDITIONS
- m. SUPPLEMENTARY GENERAL CONDITIONS
- n. PEACH COUNTY CONDITIONS
- o. TECHNICAL SPECIFICATIONS
- p. DRAWINGS AS STATED IN SUPPLEMENTARY GENERAL CONDITIONS
- q. ADDENDA:
 - No. ___, dated _____, 2021
 - No. ___, dated _____, 2021
 - No. ___, dated _____, 2021

- 6. The OWNER will pay to the CONTRACTOR in the manner and at such times as set forth in the General Conditions such amounts as required by the CONTRACT DOCUMENTS.
- 7. This Agreement shall be binding upon all parties hereto and their respective heirs, executors, administrators, successors, and assigns.

IN WITNESS WHEREOF, the parties hereto have executed, or caused to be executed by their duly authorized officials, this Agreement in (4 copies) each of which shall be deemed an original on the date first above written.

(signatures on following page)

Section 00500
AGREEMENT

(SEAL) Owner: Peach County Board of Commissioners

ATTEST: By: _____

Name: Martin H. Moseley, Jr.
Chairman, Peach County Board of

Name: _____ Title: Commissioners

Title: _____ Address: 213 Persons Street

Title: _____ Fort Valley, Georgia 31030

(SEAL) Contractor: _____

ATTEST: By: _____

Name: _____

Name: _____ Title: _____

Title: _____ Address: _____

Title: _____

KNOW ALL MEN BY THESE PRESENTS: that

_____ (Name of Contractor)

_____ (Address of Contractor)

a _____, hereinafter called Principal, and
(Corporation, Partnership, or Individual)

_____ (Name of Surety)

_____ (Address of Surety)

hereinafter called Surety, are held and firmly bound unto the

Peach County Board of Commissioners
_____ (Name of Owner)

213 Persons Street, Fort Valley, Georgia 31030
_____ (Address of Owner)

hereinafter called OWNER, in the penal sum of _____ Dollars,
(\$ _____) in lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, successors, and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that whereas, the Principal entered into a certain contract with the OWNER, dated the . day of _____, 2021, a copy of which is hereto attached and made a part hereof, for the construction of: Fullwood Road Improvements, Phase II.

NOW THEREFORE, if the Principal shall well, truly and faithfully perform its duties, all the undertakings, covenants, terms, conditions, and agreements of said contract during the original term thereof, and any extensions thereof which may be granted by the OWNER, with or without notice to the Surety, and during the one-year guaranty period, and if he shall satisfy all claims and demands incurred under such contract, and shall fully indemnify and save harmless the OWNER from all costs and damages which it may suffer by reason of failure to do so, and shall reimburse and repay the OWNER all outlay and expense which the OWNER may incur in making good any default, then this obligation shall be void; otherwise to remain in full force and effect.

PROVIDED, FURTHER, that the said Surety for value received hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the contract or to the WORK to be performed thereunder or the SPECIFICATIONS accompanying the same shall in any wise affect its obligation on this BOND, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the contract or to the WORK or to the SPECIFICATIONS.

PROVIDED, FURTHER, that no final settlement between the OWNER and the CONTRACTOR shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

IN WITNESS WHEREOF, this instrument is executed in _____ counterparts, each one of which shall be deemed an original, this the _____ day of _____, 2021.

ATTEST:

Principal: _____

(Principal Secretary)

(SEAL)

By: _____ (s)

(Address)

Witness as to Principal

Surety

(Address)

By: _____
Attorney-in-Fact

By: _____

ATTEST:

(Address)

Witness as to Surety

(Address)

Note: DATE OF BOND MUST NOT BE PRIOR TO DATE OF CONTRACT. IF CONTRACTOR is Partnership, all partners should execute BOND.

IMPORTANT: Surety companies executing BONDS must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the State where the PROJECT is located.

KNOW ALL MEN BY THESE PRESENTS: that

(Name of Contractor)

(Address of Contractor)

a _____, hereinafter called Principal, and
(Corporation, Partnership, or Individual)

(Name of Surety)

(Address of Surety)

hereinafter called SURETY, are held and firmly bound unto

Peach County Board of Commissioners

(Name of Owner)

213 Persons Street, Fort Valley, Georgia 31030

(Address of Owner)

hereinafter called OWNER, in the penal sum of _____ Dollars,
(\$ _____) in lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, successors, and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that whereas, the Principal entered into a certain contract with the OWNER, dated the _____ day of _____, 2021, a copy of which is hereto attached and made a part hereof, for the construction of: Fullwood Road Improvements, Phase II Extension.

NOW THEREFORE, if the Principal shall promptly make payment to all persons, firms, SUBCONTRACTORS, and corporations furnishing materials for or performing labor in the prosecution of the WORK provided for in such contract, and any authorized extension or modification thereof, including all amounts due for materials, lubricants, oil, gasoline, coal and coke, repairs on machinery, equipment and tools, consumed or used in connection with the construction of such WORK, and all insurance premiums on said WORK, and for all labor performed in such WORK whether by SUBCONTRACTOR or otherwise, then this obligation shall be void: otherwise to remain in full force and effect.

PROVIDED, FURTHER, that the said Surety for value received hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the contract or to the WORK to be performed thereunder or the SPECIFICATIONS accompanying the same shall in any wise affect its obligation on this BOND, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the contract or to the WORK or to the SPECIFICATIONS.

PROVIDED, FURTHER, that no final settlement between the OWNER and the CONTRACTOR shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

IN WITNESS WHEREOF, this instrument is executed in four (4) counterparts, each one of which shall be deemed an original, this the _____ day of, _____ 2021.

ATTEST:

(Principal Secretary)

Principal

BY: _____ (s)

(SEAL)

(Address)

Witness to Principal

(Address)

ATTEST:

(Surety Secretary)

(Surety)

BY: _____
Attorney-in-Fact

(SEAL)

(Address)

Witness to Surety

(Address)

Note: DATE OF BOND MUST NOT BE PRIOR TO DATE OF CONTRACT. IF CONTRACTOR is Partnership, all partners should execute BOND.

IMPORTANT: Surety companies executing BONDS must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the State where the PROJECT is located.

CERTIFICATE OF OWNER'S ATTORNEY

I, the undersigned, _____, the duly authorized and acting legal representative of Peach County Board of Commissioners, do hereby certify as follows: I have examined the foregoing contract and surety bonds and the manner of execution thereof, and I am of the opinion that each of the aforesaid agreements has been duly executed by the proper parties thereto acting through their duly authorized representatives; that said representatives have full power and authority to execute said agreements on behalf of the respective parties named thereon; and that the foregoing agreements constitute valid and legally binding obligations upon the parties executing the same in accordance with terms, conditions and provisions thereof.

Signature of Attorney

Date

To:

OWNER: Peach County Board of Commissioners

PROJECT DESCRIPTION: Fullwood Road Improvements – Phase II

The OWNER has considered the BID submitted by you for the above described WORK dated _____ in response to its Advertisement for BIDS and Instructions to Bidders.

You are hereby notified that your BID has been accepted for items in the amount of \$_____.

As required by the Instructions to BIDDERS, please execute the Agreement and furnish the required CONTRACTOR's Performance Bond, Payment Bond, and certificates of insurance within ten (10) calendar days from the date of this Notice to you.

If you fail to execute said Agreement and to furnish said BONDS within ten (10) days from the date of this Notice said OWNER will be entitled to consider all your rights arising out of the OWNER's acceptance of your BID as abandoned and as a forfeiture of your BID BOND. The OWNER will be entitled to such other rights as may be granted by law.

You are required to return an acknowledged copy of this NOTICE OF AWARD to the OWNER

Dated this _____ day of _____, 2021.

Owner

ACCEPTANCE OF NOTICE

Receipt of the above NOTICE OF AWARD is hereby acknowledged

this, the _____ day of _____ 2021.

BY _____

TITLE _____

TO: _____ Date: _____

You are hereby notified to commence WORK on Fullwood Road Improvements – Phase II in accordance with the Agreement dated _____ on or before _____, and you are to complete the WORK within 120 consecutive calendar days thereafter. The date of completion of all WORK is therefore _____.

Peach County Board of Commissioners
Owner

BY: _____

TITLE: Director of Engineering Services

ACCEPTANCE OF NOTICE

Receipt of the above NOTICE TO PROCEED is hereby acknowledged

this, the _____ day of _____, 2021

BY _____

TITLE _____

NOTE: Copies of the executed Notice to Proceed shall be provided to the Georgia Department of Health and Environment Control’s Central and District Offices and also to the Georgia Budget and Control Board.

**SECTION 00670
CHANGE ORDER**

No. _____

Date of Issuance: _____ Effective Date: _____

Project:	Owner:	Owner's Contract No.:
Contract:	Date of Contract:	
Contractor:	Engineer's Project No.:	

The Contract Documents are modified as follows upon execution of this Change Order:

Description:

Attachments: (List documents supporting change):

CHANGE IN CONTRACT PRICE:

Original Contract Price:

\$ _____

[Increase] [Decrease] from previously approved Change Orders No. _____ to
No. _____:

\$ _____

Contract Price prior to this Change Order:

\$ _____

[Increase] [Decrease] of this Change Order:

\$ _____

Contract Price incorporating this Change Order:

\$ _____

CHANGE IN CONTRACT TIMES:

Original Contract Working days Calendar days
Substantial completion (days or date): _____
Ready for final payment (days or date): _____

[Increase] [Decrease] from previously approved Change Orders
No. _____ to No. _____:
Substantial completion (days): _____
Ready for final payment (days): _____

Contract Times prior to this Change Order:
Substantial completion (days or date): _____
Ready for final payment (days or date): _____

[Increase] [Decrease] of this Change Order:
Substantial completion (days or date): _____
Ready for final payment (days or date): _____

Contract Times with all approved Change Orders:
Substantial completion (days or date): _____
Ready for final payment (days or date): _____

RECOMMENDED:	ACCEPTED:	ACCEPTED:
By: _____ Engineer (Authorized Signature)	By: _____ Owner (Authorized Signature)	By: _____ Contractor (Authorized Signature)
Date: _____	Date: _____	Date: _____
Approved by Funding Agency (if applicable): _____		Date: _____

A. GENERAL INFORMATION

This document was developed to provide a uniform format for handling contract changes that affect Contract Price or Contract Times. Changes that have been initiated by a Work Change Directive must be incorporated into a subsequent Change Order if they affect Price or Times.

Changes that affect Contract Price or Contract Times should be promptly covered by a Change Order. The practice of accumulating Change Orders to reduce the administrative burden may lead to unnecessary disputes.

If Milestones have been listed in the Agreement, any effect of a Change Order thereon should be addressed.

For supplemental instructions and minor changes not involving a change in the Contract Price or Contract Times, a Field Order should be used.

B. COMPLETING THE CHANGE ORDER FORM

Engineer normally initiates the form, including a description of the changes involved and attachments based upon documents and proposals submitted by Contractor, or requests from Owner, or both.

Once Engineer has completed and signed the form, all copies should be sent to Owner or Contractor for approval, depending on whether the Change Order is a true order to the Contractor or the formalization of a negotiated agreement for a previously performed change. After approval by one contracting party, all copies should be sent to the other party for approval. Engineer should make distribution of executed copies after approval by both parties.

If a change only applies to price or to times, cross out the part of the tabulation that does not apply.

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ARTICLE 1 – DEFINITIONS AND TERMINOLOGY

1.01 *Defined Terms*

- A. Wherever used in the Bidding Requirements or Contract Documents and printed with initial capital letters, the terms listed below will have the meanings indicated which are applicable to both the singular and plural thereof. In addition to terms specifically defined, terms with initial capital letters in the Contract Documents include references to identified articles and paragraphs, and the titles of other documents or forms.
1. *Addenda*—Written or graphic instruments issued prior to the opening of Bids which clarify, correct, or change the Bidding Requirements or the proposed Contract Documents.
 2. *Agreement*—The written instrument which is evidence of the agreement between Owner and Contractor covering the Work.
 3. *Application for Payment*—The form acceptable to Engineer which is to be used by Contractor during the course of the Work in requesting progress or final payments and which is to be accompanied by such supporting documentation as is required by the Contract Documents.
 4. *Asbestos*—Any material that contains more than one percent asbestos and is friable or is releasing asbestos fibers into the air above current action levels established by the United States Occupational Safety and Health Administration.
 5. *Bid*—The offer or proposal of a Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.
 6. *Bidder*—The individual or entity who submits a Bid directly to Owner.
 7. *Bidding Documents*—The Bidding Requirements and the proposed Contract Documents (including all Addenda).
 8. *Bidding Requirements*—The advertisement or invitation to bid, Instructions to Bidders, Bid security of acceptable form, if any, and the Bid Form with any supplements.
 9. *Change Order*—A document recommended by Engineer which is signed by Contractor and Owner and authorizes an addition, deletion, or revision in the Work or an adjustment in the Contract Price or the Contract Times, issued on or after the Effective Date of the Agreement.
 10. *Claim*—A demand or assertion by Owner or Contractor seeking an adjustment of Contract Price or Contract Times, or both, or other relief with respect to the terms of the Contract. A demand for money or services by a third party is not a Claim.
 11. *Contract*—The entire and integrated written agreement between the Owner and Contractor concerning the Work. The Contract supersedes prior negotiations, representations, or agreements, whether written or oral.
 12. *Contract Documents*—Those items so designated in the Agreement. Only printed or hard copies of the items listed in the Agreement are Contract Documents. Approved Shop Drawings, other

Contractor submittals, and the reports and drawings of subsurface and physical conditions are not Contract Documents.

13. *Contract Price*—The moneys payable by Owner to Contractor for completion of the Work in accordance with the Contract Documents as stated in the Agreement (subject to the provisions of Paragraph 11.03 in the case of Unit Price Work).
14. *Contract Times*—The number of days or the dates stated in the Agreement to: (i) achieve Milestones, if any; (ii) achieve Substantial Completion; and (iii) complete the Work so that it is ready for final payment as evidenced by Engineer’s written recommendation of final payment.
15. *Contractor*—The individual or entity with whom Owner has entered into the Agreement.
16. *Cost of the Work*—See Paragraph 11.01 for definition.
17. *Drawings*—That part of the Contract Documents prepared or approved by Engineer which graphically shows the scope, extent, and character of the Work to be performed by Contractor. Shop Drawings and other Contractor submittals are not Drawings as so defined.
18. *Effective Date of the Agreement*—The date indicated in the Agreement on which it becomes effective, but if no such date is indicated, it means the date on which the Agreement is signed and delivered by the last of the two parties to sign and deliver.
19. *Engineer*—The individual or entity named as such in the Agreement.
20. *Field Order*—A written order issued by Engineer which requires minor changes in the Work but which does not involve a change in the Contract Price or the Contract Times.
21. *General Requirements*—Sections of Division 1 of the Specifications.
22. *Hazardous Environmental Condition*—The presence at the Site of Asbestos, PCBs, Petroleum, Hazardous Waste, or Radioactive Material in such quantities or circumstances that may present a substantial danger to persons or property exposed thereto.
23. *Hazardous Waste*—The term Hazardous Waste shall have the meaning provided in Section 1004 of the Solid Waste Disposal Act (42 USC Section 6903) as amended from time to time.
24. *Laws and Regulations; Laws or Regulations*—Any and all applicable laws, rules, regulations, ordinances, codes, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.
25. *Liens*—Charges, security interests, or encumbrances upon Project funds, real property, or personal property.
26. *Milestone*—A principal event specified in the Contract Documents relating to an intermediate completion date or time prior to Substantial Completion of all the Work.
27. *Notice of Award*—The written notice by Owner to the Successful Bidder stating that upon timely compliance by the Successful Bidder with the condition’s precedent listed therein, Owner will sign and deliver the Agreement.

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28. *Notice to Proceed*—A written notice given by Owner to Contractor fixing the date on which the Contract Times will commence to run and on which Contractor shall start to perform the Work under the Contract Documents.
29. *Owner*—The individual or entity with whom Contractor has entered into the Agreement and for whom the Work is to be performed.
30. *PCBs*—Polychlorinated biphenyls.
31. *Petroleum*—Petroleum, including crude oil or any fraction thereof which is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute), such as oil, petroleum, fuel oil, oil sludge, oil refuse, gasoline, kerosene, and oil mixed with other non-Hazardous Waste and crude oils.
32. *Progress Schedule*—A schedule, prepared and maintained by Contractor, describing the sequence and duration of the activities comprising the Contractor's plan to accomplish the Work within the Contract Times.
33. *Project*—The total construction of which the Work to be performed under the Contract Documents may be the whole, or a part.
34. *Project Manual*—The bound documentary information prepared for bidding and constructing the Work. A listing of the contents of the Project Manual, which may be bound in one or more volumes, is contained in the table(s) of contents.
35. *Radioactive Material*—Source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954 (42 USC Section 2011 et seq.) as amended from time to time.
36. *Resident Project Representative*—The authorized representative of Engineer who may be assigned to the Site or any part thereof.
37. *Samples*—Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and which establish the standards by which such portion of the Work will be judged.
38. *Schedule of Submittals*—A schedule, prepared and maintained by Contractor, of required submittals and the time requirements to support scheduled performance of related construction activities.
39. *Schedule of Values*—A schedule, prepared and maintained by Contractor, allocating portions of the Contract Price to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.
40. *Shop Drawings*—All drawings, diagrams, illustrations, schedules, and other data or information which are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work.
41. *Site*—Lands or areas indicated in the Contract Documents as being furnished by Owner upon which the Work is to be performed, including rights-of-way and easements for access thereto, and such other lands furnished by Owner which are designated for the use of Contractor.

42. *Specifications*—That part of the Contract Documents consisting of written requirements for materials, equipment, systems, standards and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable thereto.
43. *Subcontractor*—An individual or entity having a direct contract with Contractor or with any other Subcontractor for the performance of a part of the Work at the Site.
44. *Substantial Completion*—The time at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of Engineer, the Work (or a specified part thereof) is sufficiently complete, in accordance with the Contract Documents, so that the Work (or a specified part thereof) can be utilized for the purposes for which it is intended. The terms “substantially complete” and “substantially completed” as applied to all or part of the Work refer to Substantial Completion thereof.
45. *Successful Bidder*—The Bidder submitting a responsive Bid to whom Owner makes an award.
46. *Supplementary Conditions*—That part of the Contract Documents which amends or supplements these General Conditions.
47. *Supplier*—A manufacturer, fabricator, supplier, distributor, materialman, or vendor having a direct contract with Contractor or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by Contractor or Subcontractor.
48. *Underground Facilities*—All underground pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or attachments, and any encasements containing such facilities, including those that convey electricity, gases, steam, liquid petroleum products, telephone or other communications, cable television, water, wastewater, storm water, other liquids or chemicals, or traffic or other control systems.
49. *Unit Price Work*—Work to be paid for on the basis of unit prices.
50. *Work*—The entire construction or the various separately identifiable parts thereof required to be provided under the Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction, and furnishing, installing, and incorporating all materials and equipment into such construction, all as required by the Contract Documents.
51. *Work Change Directive*—A written statement to Contractor issued on or after the Effective Date of the Agreement and signed by Owner and recommended by Engineer ordering an addition, deletion, or revision in the Work, or responding to differing or unforeseen subsurface or physical conditions under which the Work is to be performed or to emergencies. A Work Change Directive will not change the Contract Price or the Contract Times but is evidence that the parties expect that the change ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order following negotiations by the parties as to its effect, if any, on the Contract Price or Contract Times.

1.02 Terminology

- A. The words and terms discussed in Paragraph 1.02.B through F are not defined but, when used in the Bidding Requirements or Contract Documents, have the indicated meaning.

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B. Intent of Certain Terms or Adjectives:

1. The Contract Documents include the terms “as allowed,” “as approved,” “as ordered,” “as directed” or terms of like effect or import to authorize an exercise of professional judgment by Engineer. In addition, the adjectives “reasonable,” “suitable,” “acceptable,” “proper,” “satisfactory,” or adjectives of like effect or import are used to describe an action or determination of Engineer as to the Work. It is intended that such exercise of professional judgment, action, or determination will be solely to evaluate, in general, the Work for compliance with the information in the Contract Documents and with the design concept of the Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective is not intended to and shall not be effective to assign to Engineer any duty or authority to supervise or direct the performance of the Work, or any duty or authority to undertake responsibility contrary to the provisions of Paragraph 9.09 or any other provision of the Contract Documents.

C. Day:

1. The word “day” means a calendar day of 24 hours measured from midnight to the next midnight.

D. Defective:

1. The word “defective,” when modifying the word “Work,” refers to Work that is unsatisfactory, faulty, or deficient in that it:
 - a. does not conform to the Contract Documents; or
 - b. does not meet the requirements of any applicable inspection, reference standard, test, or approval referred to in the Contract Documents; or
 - c. has been damaged prior to Engineer’s recommendation of final payment (unless responsibility for the protection thereof has been assumed by Owner at Substantial Completion in accordance with Paragraph 14.04 or 14.05).

E. Furnish, Install, Perform, Provide:

1. The word “furnish,” when used in connection with services, materials, or equipment, shall mean to supply and deliver said services, materials, or equipment to the Site (or some other specified location) ready for use or installation and in usable or operable condition.
2. The word “install,” when used in connection with services, materials, or equipment, shall mean to put into use or place in final position said services, materials, or equipment complete and ready for intended use.
3. The words “perform” or “provide,” when used in connection with services, materials, or equipment, shall mean to furnish and install said services, materials, or equipment complete and ready for intended use.
4. When “furnish,” “install,” “perform,” or “provide” is not used in connection with services, materials, or equipment in a context clearly requiring an obligation of Contractor, “provide” is implied.

- F. Unless stated otherwise in the Contract Documents, words or phrases that have a well-known technical or construction industry or trade meaning are used in the Contract Documents in accordance with such recognized meaning.

ARTICLE 2 – PRELIMINARY MATTERS

2.01 Delivery of Bonds and Evidence of Insurance

- A. When Contractor delivers the executed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner such bonds as Contractor may be required to furnish.
- B. *Evidence of Insurance:* Before any Work at the Site is started, Contractor and Owner shall each deliver to the other, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance which either of them or any additional insured may reasonably request) which Contractor and Owner respectively are required to purchase and maintain in accordance with Article 5.

2.02 Copies of Documents

- A. Owner shall furnish to Contractor up to ten printed or hard copies of the Drawings and Project Manual. Additional copies will be furnished upon request at the cost of reproduction.

2.03 Commencement of Contract Times; Notice to Proceed

- A. The Contract Times will commence to run on the thirtieth day after the Effective Date of the Agreement or, if a Notice to Proceed is given, on the day indicated in the Notice to Proceed. A Notice to Proceed may be given at any time within 30 days after the Effective Date of the Agreement. In no event will the Contract Times commence to run later than the sixtieth day after the day of Bid opening or the thirtieth day after the Effective Date of the Agreement, whichever date is earlier.

2.04 Starting the Work

- A. Contractor shall start to perform the Work on the date when the Contract Times commence to run. No Work shall be done at the Site prior to the date on which the Contract Times commence to run.

2.05 Before Starting Construction

- A. *Preliminary Schedules:* Within 10 days after the Effective Date of the Agreement (unless otherwise specified in the General Requirements), Contractor shall submit to Engineer for timely review:
1. a preliminary Progress Schedule indicating the times (numbers of days or dates) for starting and completing the various stages of the Work, including any Milestones specified in the Contract Documents;
 2. a preliminary Schedule of Submittals; and
 3. a preliminary Schedule of Values for all of the Work which includes quantities and prices of items which when added together equal the Contract Price and subdivides the Work into component parts in sufficient detail to serve as the basis for progress payments during performance of the Work. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work.

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2.06 *Preconstruction Conference; Designation of Authorized Representatives*

- A. Before any Work at the Site is started, a conference attended by Owner, Contractor, Engineer, and others as appropriate will be held to establish a working understanding among the parties as to the Work and to discuss the schedules referred to in Paragraph 2.05.A, procedures for handling Shop Drawings and other submittals, processing Applications for Payment, and maintaining required records.
- B. At this conference Owner and Contractor each shall designate, in writing, a specific individual to act as its authorized representative with respect to the services and responsibilities under the Contract. Such individuals shall have the authority to transmit instructions, receive information, render decisions relative to the Contract, and otherwise act on behalf of each respective party.

2.07 *Initial Acceptance of Schedules*

- A. At least 10 days before submission of the first Application for Payment a conference attended by Contractor, Engineer, and others as appropriate will be held to review for acceptability to Engineer as provided below the schedules submitted in accordance with Paragraph 2.05.A. Contractor shall have an additional 10 days to make corrections and adjustments and to complete and resubmit the schedules. No progress payment shall be made to Contractor until acceptable schedules are submitted to Engineer.
 - 1. The Progress Schedule will be acceptable to Engineer if it provides an orderly progression of the Work to completion within the Contract Times. Such acceptance will not impose on Engineer responsibility for the Progress Schedule, for sequencing, scheduling, or progress of the Work, nor interfere with or relieve Contractor from Contractor's full responsibility therefor.
 - 2. Contractor's Schedule of Submittals will be acceptable to Engineer if it provides a workable arrangement for reviewing and processing the required submittals.
 - 3. Contractor's Schedule of Values will be acceptable to Engineer as to form and substance if it provides a reasonable allocation of the Contract Price to component parts of the Work.

ARTICLE 3 – CONTRACT DOCUMENTS: INTENT, AMENDING, REUSE

3.01 *Intent*

- A. The Contract Documents are complementary; what is required by one is as binding as if required by all.
- B. It is the intent of the Contract Documents to describe a functionally complete project (or part thereof) to be constructed in accordance with the Contract Documents. Any labor, documentation, services, materials, or equipment that reasonably may be inferred from the Contract Documents or from prevailing custom or trade usage as being required to produce the indicated result will be provided whether or not specifically called for, at no additional cost to Owner.
- C. Clarifications and interpretations of the Contract Documents shall be issued by Engineer as provided in Article 9.

3.02 *Reference Standards*

- A. Standards, Specifications, Codes, Laws, and Regulations

1. Reference to standards, specifications, manuals, or codes of any technical society, organization, or association, or to Laws or Regulations, whether such reference be specific or by implication, shall mean the standard, specification, manual, code, or Laws or Regulations in effect at the time of opening of Bids (or on the Effective Date of the Agreement if there were no Bids), except as may be otherwise specifically stated in the Contract Documents.
2. No provision of any such standard, specification, manual, or code, or any instruction of a Supplier, shall be effective to change the duties or responsibilities of Owner, Contractor, or Engineer, or any of their subcontractors, consultants, agents, or employees, from those set forth in the Contract Documents. No such provision or instruction shall be effective to assign to Owner, Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, any duty or authority to supervise or direct the performance of the Work or any duty or authority to undertake responsibility inconsistent with the provisions of the Contract Documents.

3.03 *Reporting and Resolving Discrepancies*

A. *Reporting Discrepancies:*

1. *Contractor's Review of Contract Documents Before Starting Work:* Before undertaking each part of the Work, Contractor shall carefully study and compare the Contract Documents and check and verify pertinent figures therein and all applicable field measurements. Contractor shall promptly report in writing to Engineer any conflict, error, ambiguity, or discrepancy which Contractor discovers, or has actual knowledge of, and shall obtain a written interpretation or clarification from Engineer before proceeding with any Work affected thereby.
2. *Contractor's Review of Contract Documents During Performance of Work:* If, during the performance of the Work, Contractor discovers any conflict, error, ambiguity, or discrepancy within the Contract Documents, or between the Contract Documents and (a) any applicable Law or Regulation, (b) any standard, specification, manual, or code, or (c) any instruction of any Supplier, then Contractor shall promptly report it to Engineer in writing. Contractor shall not proceed with the Work affected thereby (except in an emergency as required by Paragraph 6.16.A) until an amendment or supplement to the Contract Documents has been issued by one of the methods indicated in Paragraph 3.04.
3. Contractor shall not be liable to Owner or Engineer for failure to report any conflict, error, ambiguity, or discrepancy in the Contract Documents unless Contractor had actual knowledge thereof.

B. *Resolving Discrepancies:*

1. Except as may be otherwise specifically stated in the Contract Documents, the provisions of the Contract Documents shall take precedence in resolving any conflict, error, ambiguity, or discrepancy between the provisions of the Contract Documents and:
 - a. the provisions of any standard, specification, manual, or code, or the instruction of any Supplier (whether or not specifically incorporated by reference in the Contract Documents); or
 - b. the provisions of any Laws or Regulations applicable to the performance of the Work (unless such an interpretation of the provisions of the Contract Documents would result in violation of such Law or Regulation).

3.04 *Amending and Supplementing Contract Documents*

- A. The Contract Documents may be amended to provide for additions, deletions, and revisions in the Work or to modify the terms and conditions thereof by either a Change Order or a Work Change Directive.
- B. The requirements of the Contract Documents may be supplemented, and minor variations and deviations in the Work may be authorized, by one or more of the following ways:
 - 1. A Field Order;
 - 2. Engineer's approval of a Shop Drawing or Sample (subject to the provisions of Paragraph 6.17.D.3);
or
 - 3. Engineer's written interpretation or clarification.

3.05 *Reuse of Documents*

- A. Contractor and any Subcontractor or Supplier shall not:
 - 1. have or acquire any title to or ownership rights in any of the Drawings, Specifications, or other documents (or copies of any thereof) prepared by or bearing the seal of Engineer or its consultants, including electronic media editions; or
 - 2. reuse any such Drawings, Specifications, other documents, or copies thereof on extensions of the Project or any other project without written consent of Owner and Engineer and specific written verification or adaptation by Engineer.
- B. The prohibitions of this Paragraph 3.05 will survive final payment, or termination of the Contract. Nothing herein shall preclude Contractor from retaining copies of the Contract Documents for record purposes.

3.06 *Electronic Data*

- A. Unless otherwise stated in the Supplementary Conditions, the data furnished by Owner or Engineer to Contractor, or by Contractor to Owner or Engineer, that may be relied upon are limited to the printed copies (also known as hard copies). Files in electronic media format of text, data, graphics, or other types are furnished only for the convenience of the receiving party. Any conclusion or information obtained or derived from such electronic files will be at the user's sole risk. If there is a discrepancy between the electronic files and the hard copies, the hard copies govern.
- B. Because data stored in electronic media format can deteriorate or be modified inadvertently or otherwise without authorization of the data's creator, the party receiving electronic files agrees that it will perform acceptance tests or procedures within 60 days, after which the receiving party shall be deemed to have accepted the data thus transferred. Any errors detected within the 60-day acceptance period will be corrected by the transferring party.
- C. When transferring documents in electronic media format, the transferring party makes no representations as to long term compatibility, usability, or readability of documents resulting from the use of software application packages, operating systems, or computer hardware differing from those used by the data's creator.

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**ARTICLE 4 – AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS;
HAZARDOUS ENVIRONMENTAL CONDITIONS; REFERENCE POINTS**4.01 *Availability of Lands*

- A. Owner shall furnish the Site. Owner shall notify Contractor of any encumbrances or restrictions not of general application but specifically related to use of the Site with which Contractor must comply in performing the Work. Owner will obtain in a timely manner and pay for easements for permanent structures or permanent changes in existing facilities. If Contractor and Owner are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, as a result of any delay in Owner's furnishing the Site or a part thereof, Contractor may make a Claim therefor as provided in Paragraph 10.05.
- B. Upon reasonable written request, Owner shall furnish Contractor with a current statement of record legal title and legal description of the lands upon which the Work is to be performed and Owner's interest therein as necessary for giving notice of or filing a mechanic's or construction lien against such lands in accordance with applicable Laws and Regulations.
- C. Contractor shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

4.02 *Subsurface and Physical Conditions*

- A. *Reports and Drawings:* The Supplementary Conditions identify:
 - 1. those reports known to Owner of explorations and tests of subsurface conditions at or contiguous to the Site; and
 - 2. those drawings known to Owner of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities).
- B. *Limited Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such "technical data" is identified in the Supplementary Conditions. Except for such reliance on such "technical data," Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors with respect to:
 - 1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto; or
 - 2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or
 - 3. any Contractor interpretation of or conclusion drawn from any "technical data" or any such other data, interpretations, opinions, or information.

4.03 *Differing Subsurface or Physical Conditions*

- A. *Notice:* If Contractor believes that any subsurface or physical condition that is uncovered or revealed either:
1. is of such a nature as to establish that any “technical data” on which Contractor is entitled to rely as provided in Paragraph 4.02 is materially inaccurate; or
 2. is of such a nature as to require a change in the Contract Documents; or
 3. differs materially from that shown or indicated in the Contract Documents; or
 4. is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents;

then Contractor shall, promptly after becoming aware thereof and before further disturbing the subsurface or physical conditions or performing any Work in connection therewith (except in an emergency as required by Paragraph 6.16.A), notify Owner and Engineer in writing about such condition. Contractor shall not further disturb such condition or perform any Work in connection therewith (except as aforesaid) until receipt of written order to do so.

- B. *Engineer’s Review:* After receipt of written notice as required by Paragraph 4.03.A, Engineer will promptly review the pertinent condition, determine the necessity of Owner’s obtaining additional exploration or tests with respect thereto, and advise Owner in writing (with a copy to Contractor) of Engineer’s findings and conclusions.

C. *Possible Price and Times Adjustments:*

1. The Contract Price or the Contract Times, or both, will be equitably adjusted to the extent that the existence of such differing subsurface or physical condition causes an increase or decrease in Contractor’s cost of, or time required for, performance of the Work; subject, however, to the following:
 - a. such condition must meet any one or more of the categories described in Paragraph 4.03.A; and
 - b. with respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraphs 9.07 and 11.03.
2. Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times if:
 - a. Contractor knew of the existence of such conditions at the time Contractor made a final commitment to Owner with respect to Contract Price and Contract Times by the submission of a Bid or becoming bound under a negotiated contract; or
 - b. the existence of such condition could reasonably have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and contiguous areas required by the Bidding Requirements or Contract Documents to be conducted by or for Contractor prior to Contractor’s making such final commitment; or
 - c. Contractor failed to give the written notice as required by Paragraph 4.03.A.

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3. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, a Claim may be made therefor as provided in Paragraph 10.05. However, neither Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors shall be liable to Contractor for any claims, costs, losses, or damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Contractor on or in connection with any other project or anticipated project.

4.04 *Underground Facilities*

A. *Shown or Indicated:* The information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or contiguous to the Site is based on information and data furnished to Owner or Engineer by the owners of such Underground Facilities, including Owner, or by others. Unless it is otherwise expressly provided in the Supplementary Conditions:

1. Owner and Engineer shall not be responsible for the accuracy or completeness of any such information or data provided by others; and
2. the cost of all of the following will be included in the Contract Price, and Contractor shall have full responsibility for:
 - a. reviewing and checking all such information and data;
 - b. locating all Underground Facilities shown or indicated in the Contract Documents;
 - c. coordination of the Work with the owners of such Underground Facilities, including Owner, during construction; and
 - d. the safety and protection of all such Underground Facilities and repairing any damage thereto resulting from the Work.

B. *Not Shown or Indicated:*

1. If an Underground Facility is uncovered or revealed at or contiguous to the Site which was not shown or indicated, or not shown or indicated with reasonable accuracy in the Contract Documents, Contractor shall, promptly after becoming aware thereof and before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as required by Paragraph 6.16.A), identify the owner of such Underground Facility and give written notice to that owner and to Owner and Engineer. Engineer will promptly review the Underground Facility and determine the extent, if any, to which a change is required in the Contract Documents to reflect and document the consequences of the existence or location of the Underground Facility. During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.
2. If Engineer concludes that a change in the Contract Documents is required, a Work Change Directive or a Change Order will be issued to reflect and document such consequences. An equitable adjustment shall be made in the Contract Price or Contract Times, or both, to the extent that they are attributable to the existence or location of any Underground Facility that was not shown or indicated or not shown or indicated with reasonable accuracy in the Contract Documents and that Contractor did not know of and could not reasonably have been expected to be aware of or to have anticipated. If

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Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment in Contract Price or Contract Times, Owner or Contractor may make a Claim therefor as provided in Paragraph 10.05.

4.05 *Reference Points*

- A. Owner shall provide engineering surveys to establish reference points for construction which in Engineer's judgment are necessary to enable Contractor to proceed with the Work. Contractor shall be responsible for laying out the Work, shall protect and preserve the established reference points and property monuments, and shall make no changes or relocations without the prior written approval of Owner. Contractor shall report to Engineer whenever any reference point or property monument is lost or destroyed or requires relocation because of necessary changes in grades or locations and shall be responsible for the accurate replacement or relocation of such reference points or property monuments by professionally qualified personnel.

4.06 *Hazardous Environmental Condition at Site*

- A. *Reports and Drawings:* The Supplementary Conditions identify those reports and drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at the Site.
- B. *Limited Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such "technical data" is identified in the Supplementary Conditions. Except for such reliance on such "technical data," Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors with respect to:
1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures of construction to be employed by Contractor and safety precautions and programs incident thereto; or
 2. other data, interpretations, opinions and information contained in such reports or shown or indicated in such drawings; or
 3. any Contractor interpretation of or conclusion drawn from any "technical data" or any such other data, interpretations, opinions or information.
- C. Contractor shall not be responsible for any Hazardous Environmental Condition uncovered or revealed at the Site which was not shown or indicated in Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work. Contractor shall be responsible for a Hazardous Environmental Condition created with any materials brought to the Site by Contractor, Subcontractors, Suppliers, or anyone else for whom Contractor is responsible.
- D. If Contractor encounters a Hazardous Environmental Condition or if Contractor or anyone for whom Contractor is responsible creates a Hazardous Environmental Condition, Contractor shall immediately: (i) secure or otherwise isolate such condition; (ii) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by Paragraph 6.16.A); and (iii) notify Owner and Engineer (and promptly thereafter confirm such notice in writing). Owner shall promptly consult with Engineer concerning the necessity for Owner to retain a qualified expert to evaluate such condition or take corrective action, if any. Promptly after consulting with Engineer, Owner shall take

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such actions as are necessary to permit Owner to timely obtain required permits and provide Contractor the written notice required by Paragraph 4.06.E.

- E. Contractor shall not be required to resume Work in connection with such condition or in any affected area until after Owner has obtained any required permits related thereto and delivered written notice to Contractor: (i) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work; or (ii) specifying any special conditions under which such Work may be resumed safely. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times, or both, as a result of such Work stoppage or such special conditions under which Work is agreed to be resumed by Contractor, either party may make a Claim therefor as provided in Paragraph 10.05.
- F. If after receipt of such written notice Contractor does not agree to resume such Work based on a reasonable belief it is unsafe or does not agree to resume such Work under such special conditions, then Owner may order the portion of the Work that is in the area affected by such condition to be deleted from the Work. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of an adjustment in Contract Price or Contract Times as a result of deleting such portion of the Work, then either party may make a Claim therefor as provided in Paragraph 10.05. Owner may have such deleted portion of the Work performed by Owner's own forces or others in accordance with Article 7.
- G. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition, provided that such Hazardous Environmental Condition: (i) was not shown or indicated in the Drawings or Specifications or identified in the Contract Documents to be included within the scope of the Work, and (ii) was not created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 4.06.G shall obligate Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.
- H. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 4.06.H shall obligate Contractor to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.
- I. The provisions of Paragraphs 4.02, 4.03, and 4.04 do not apply to a Hazardous Environmental Condition uncovered or revealed at the Site.

ARTICLE 5 – BONDS AND INSURANCE

5.01 *Performance, Payment, and Other Bonds*

- A. Contractor shall furnish performance and payment bonds, each in an amount at least equal to the Contract Price as security for the faithful performance and payment of all of Contractor's obligations under the Contract Documents. These bonds shall remain in effect until one year after the date when final payment

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becomes due or until completion of the correction period specified in Paragraph 13.07, whichever is later, except as provided otherwise by Laws or Regulations or by the Contract Documents. Contractor shall also furnish such other bonds as are required by the Contract Documents.

- B. All bonds shall be in the form prescribed by the Contract Documents except as provided otherwise by Laws or Regulations and shall be executed by such sureties as are named in the list of “Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies” as published in Circular 570 (amended) by the Financial Management Service, Surety Bond Branch, U.S. Department of the Treasury. All bonds signed by an agent or attorney-in-fact must be accompanied by a certified copy of that individual’s authority to bind the surety. The evidence of authority shall show that it is effective on the date the agent or attorney-in-fact signed each bond.
- C. If the surety on any bond furnished by Contractor is declared bankrupt or becomes insolvent or its right to do business is terminated in any state where any part of the Project is located or it ceases to meet the requirements of Paragraph 5.01.B, Contractor shall promptly notify Owner and Engineer and shall, within 20 days after the event giving rise to such notification, provide another bond and surety, both of which shall comply with the requirements of Paragraphs 5.01.B and 5.02.

5.02 *Licensed Sureties and Insurers*

- A. All bonds and insurance required by the Contract Documents to be purchased and maintained by Owner or Contractor shall be obtained from surety or insurance companies that are duly licensed or authorized in the jurisdiction in which the Project is located to issue bonds or insurance policies for the limits and coverages so required. Such surety and insurance companies shall also meet such additional requirements and qualifications as may be provided in the Supplementary Conditions.

5.03 *Certificates of Insurance*

- A. Contractor shall deliver to Owner, with copies to each additional insured and loss payee identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by Owner or any other additional insured) which Contractor is required to purchase and maintain.
- B. Owner shall deliver to Contractor, with copies to each additional insured and loss payee identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by Contractor or any other additional insured) which Owner is required to purchase and maintain.
- C. Failure of Owner to demand such certificates or other evidence of Contractor's full compliance with these insurance requirements or failure of Owner to identify a deficiency in compliance from the evidence provided shall not be construed as a waiver of Contractor’s obligation to maintain such insurance.
- D. Owner does not represent that insurance coverage and limits established in this Contract necessarily will be adequate to protect Contractor.
- E. The insurance and insurance limits required herein shall not be deemed as a limitation on Contractor’s liability under the indemnities granted to Owner in the Contract Documents.

5.04 *Contractor’s Insurance*

- A. Contractor shall purchase and maintain such insurance as is appropriate for the Work being performed and as will provide protection from claims set forth below which may arise out of or result from

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Contractor's performance of the Work and Contractor's other obligations under the Contract Documents, whether it is to be performed by Contractor, any Subcontractor or Supplier, or by anyone directly or indirectly employed by any of them to perform any of the Work, or by anyone for whose acts any of them may be liable:

1. claims under workers' compensation, disability benefits, and other similar employee benefit acts;
 2. claims for damages because of bodily injury, occupational sickness or disease, or death of Contractor's employees;
 3. claims for damages because of bodily injury, sickness or disease, or death of any person other than Contractor's employees;
 4. claims for damages insured by reasonably available personal injury liability coverage which are sustained:
 - a. by any person as a result of an offense directly or indirectly related to the employment of such person by Contractor, or
 - b. by any other person for any other reason;
 5. claims for damages, other than to the Work itself, because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom; and
 6. claims for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance or use of any motor vehicle.
- B. The policies of insurance required by this Paragraph 5.04 shall:
1. with respect to insurance required by Paragraphs 5.04.A.3 through 5.04.A.6 inclusive, be written on an occurrence basis, include as additional insureds (subject to any customary exclusion regarding professional liability) Owner and Engineer, and any other individuals or entities identified in the Supplementary Conditions, all of whom shall be listed as additional insureds, and include coverage for the respective officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of all such additional insureds, and the insurance afforded to these additional insureds shall provide primary coverage for all claims covered thereby;
 2. include at least the specific coverages and be written for not less than the limits of liability provided in the Supplementary Conditions or required by Laws or Regulations, whichever is greater;
 3. include contractual liability insurance covering Contractor's indemnity obligations under Paragraphs 6.11 and 6.20;
 4. contain a provision or endorsement that the coverage afforded will not be canceled, materially changed or renewal refused until at least 30 days prior written notice has been given to Owner and Contractor and to each other additional insured identified in the Supplementary Conditions to whom a certificate of insurance has been issued (and the certificates of insurance furnished by the Contractor pursuant to Paragraph 5.03 will so provide);

5. remain in effect at least until final payment and at all times thereafter when Contractor may be correcting, removing, or replacing defective Work in accordance with Paragraph 13.07; and
6. include completed operations coverage:
 - a. Such insurance shall remain in effect for two years after final payment.
 - b. Contractor shall furnish Owner and each other additional insured identified in the Supplementary Conditions, to whom a certificate of insurance has been issued, evidence satisfactory to Owner and any such additional insured of continuation of such insurance at final payment and one year thereafter.

5.05 *Owner's Liability Insurance*

- A. In addition to the insurance required to be provided by Contractor under Paragraph 5.04, Owner, at Owner's option, may purchase and maintain at Owner's expense Owner's own liability insurance as will protect Owner against claims which may arise from operations under the Contract Documents.

5.06 *Property Insurance*

- A. Unless otherwise provided in the Supplementary Conditions, Owner shall purchase and maintain property insurance upon the Work at the Site in the amount of the full replacement cost thereof (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). This insurance shall:
 1. include the interests of Owner, Contractor, Subcontractors, and Engineer, and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, each of whom is deemed to have an insurable interest and shall be listed as a loss payee;
 2. be written on a Builder's Risk "all-risk" policy form that shall at least include insurance for physical loss or damage to the Work, temporary buildings, falsework, and materials and equipment in transit, and shall insure against at least the following perils or causes of loss: fire, lightning, extended coverage, theft, vandalism and malicious mischief, earthquake, collapse, debris removal, demolition occasioned by enforcement of Laws and Regulations, water damage (other than that caused by flood), and such other perils or causes of loss as may be specifically required by the Supplementary Conditions.
 3. include expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers and architects);
 4. cover materials and equipment stored at the Site or at another location that was agreed to in writing by Owner prior to being incorporated in the Work, provided that such materials and equipment have been included in an Application for Payment recommended by Engineer;
 5. allow for partial utilization of the Work by Owner;
 6. include testing and startup; and

7. be maintained in effect until final payment is made unless otherwise agreed to in writing by Owner, Contractor, and Engineer with 30 days written notice to each other loss payee to whom a certificate of insurance has been issued.
- B. Owner shall purchase and maintain such equipment breakdown insurance or additional property insurance as may be required by the Supplementary Conditions or Laws and Regulations which will include the interests of Owner, Contractor, Subcontractors, and Engineer, and any other individuals or entities identified in the Supplementary Conditions, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, each of whom is deemed to have an insurable interest and shall be listed as a loss payee.
- C. All the policies of insurance (and the certificates or other evidence thereof) required to be purchased and maintained in accordance with this Paragraph 5.06 will contain a provision or endorsement that the coverage afforded will not be canceled or materially changed or renewal refused until at least 30 days prior written notice has been given to Owner and Contractor and to each other loss payee to whom a certificate of insurance has been issued and will contain waiver provisions in accordance with Paragraph 5.07.
- D. Owner shall not be responsible for purchasing and maintaining any property insurance specified in this Paragraph 5.06 to protect the interests of Contractor, Subcontractors, or others in the Work to the extent of any deductible amounts that are identified in the Supplementary Conditions. The risk of loss within such identified deductible amount will be borne by Contractor, Subcontractors, or others suffering any such loss, and if any of them wishes property insurance coverage within the limits of such amounts, each may purchase and maintain it at the purchaser's own expense.
- E. If Contractor requests in writing that other special insurance be included in the property insurance policies provided under this Paragraph 5.06, Owner shall, if possible, include such insurance, and the cost thereof will be charged to Contractor by appropriate Change Order. Prior to commencement of the Work at the Site, Owner shall in writing advise Contractor whether or not such other insurance has been procured by Owner.

5.07 *Waiver of Rights*

- A. Owner and Contractor intend that all policies purchased in accordance with Paragraph 5.06 will protect Owner, Contractor, Subcontractors, and Engineer, and all other individuals or entities identified in the Supplementary Conditions as loss payees (and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them) in such policies and will provide primary coverage for all losses and damages caused by the perils or causes of loss covered thereby. All such policies shall contain provisions to the effect that in the event of payment of any loss or damage the insurers will have no rights of recovery against any of the insureds or loss payees thereunder. Owner and Contractor waive all rights against each other and their respective officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them for all losses and damages caused by, arising out of or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work; and, in addition, waive all such rights against Subcontractors and Engineer, and all other individuals or entities identified in the Supplementary Conditions as loss payees (and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them) under such policies for losses and damages so caused. None of the above waivers shall extend to the rights that any party making such waiver may have to the proceeds of insurance held by Owner as trustee or otherwise payable under any policy so issued.

- B. Owner waives all rights against Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them for:
1. loss due to business interruption, loss of use, or other consequential loss extending beyond direct physical loss or damage to Owner's property or the Work caused by, arising out of, or resulting from fire or other perils whether or not insured by Owner; and
 2. loss or damage to the completed Project or part thereof caused by, arising out of, or resulting from fire or other insured peril or cause of loss covered by any property insurance maintained on the completed Project or part thereof by Owner during partial utilization pursuant to Paragraph 14.05, after Substantial Completion pursuant to Paragraph 14.04, or after final payment pursuant to Paragraph 14.07.
- C. Any insurance policy maintained by Owner covering any loss, damage or consequential loss referred to in Paragraph 5.07.B shall contain provisions to the effect that in the event of payment of any such loss, damage, or consequential loss, the insurers will have no rights of recovery against Contractor, Subcontractors, or Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them.

5.08 *Receipt and Application of Insurance Proceeds*

- A. Any insured loss under the policies of insurance required by Paragraph 5.06 will be adjusted with Owner and made payable to Owner as fiduciary for the loss payees, as their interests may appear, subject to the requirements of any applicable mortgage clause and of Paragraph 5.08.B. Owner shall deposit in a separate account any money so received and shall distribute it in accordance with such agreement as the parties in interest may reach. If no other special agreement is reached, the damaged Work shall be repaired or replaced, the moneys so received applied on account thereof, and the Work and the cost thereof covered by an appropriate Change Order.
- B. Owner as fiduciary shall have power to adjust and settle any loss with the insurers unless one of the parties in interest shall object in writing within 15 days after the occurrence of loss to Owner's exercise of this power. If such objection be made, Owner as fiduciary shall make settlement with the insurers in accordance with such agreement as the parties in interest may reach. If no such agreement among the parties in interest is reached, Owner as fiduciary shall adjust and settle the loss with the insurers and, if required in writing by any party in interest, Owner as fiduciary shall give bond for the proper performance of such duties.

5.09 *Acceptance of Bonds and Insurance; Option to Replace*

- A. If either Owner or Contractor has any objection to the coverage afforded by or other provisions of the bonds or insurance required to be purchased and maintained by the other party in accordance with Article 5 on the basis of non-conformance with the Contract Documents, the objecting party shall so notify the other party in writing within 10 days after receipt of the certificates (or other evidence requested) required by Paragraph 2.01.B. Owner and Contractor shall each provide to the other such additional information in respect of insurance provided as the other may reasonably request. If either party does not purchase or maintain all of the bonds and insurance required of such party by the Contract Documents, such party shall notify the other party in writing of such failure to purchase prior to the start of the Work, or of such failure to maintain prior to any change in the required coverage. Without prejudice to any other right or remedy, the other party may elect to obtain equivalent bonds or insurance to protect such other party's

interests at the expense of the party who was required to provide such coverage, and a Change Order shall be issued to adjust the Contract Price accordingly.

5.10 *Partial Utilization, Acknowledgment of Property Insurer*

- A. If Owner finds it necessary to occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work as provided in Paragraph 14.05, no such use or occupancy shall commence before the insurers providing the property insurance pursuant to Paragraph 5.06 have acknowledged notice thereof and in writing effected any changes in coverage necessitated thereby. The insurers providing the property insurance shall consent by endorsement on the policy or policies, but the property insurance shall not be canceled or permitted to lapse on account of any such partial use or occupancy.

ARTICLE 6 – CONTRACTOR’S RESPONSIBILITIES

6.01 *Supervision and Superintendence*

- A. Contractor shall supervise, inspect, and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents. Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction. Contractor shall not be responsible for the negligence of Owner or Engineer in the design or specification of a specific means, method, technique, sequence, or procedure of construction which is shown or indicated in and expressly required by the Contract Documents.
- B. At all times during the progress of the Work, Contractor shall assign a competent resident superintendent who shall not be replaced without written notice to Owner and Engineer except under extraordinary circumstances.

6.02 *Labor; Working Hours*

- A. Contractor shall provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. Contractor shall at all times maintain good discipline and order at the Site.
- B. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise stated in the Contract Documents, all Work at the Site shall be performed during regular working hours. Contractor will not permit the performance of Work on a Saturday, Sunday, or any legal holiday without Owner’s written consent (which will not be unreasonably withheld) given after prior written notice to Engineer.

6.03 *Services, Materials, and Equipment*

- A. Unless otherwise specified in the Contract Documents, Contractor shall provide and assume full responsibility for all services, materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities, and all other facilities and incidentals necessary for the performance, testing, start-up, and completion of the Work.
- B. All materials and equipment incorporated into the Work shall be as specified or, if not specified, shall be of good quality and new, except as otherwise provided in the Contract Documents. All special warranties

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and guarantees required by the Specifications shall expressly run to the benefit of Owner. If required by Engineer, Contractor shall furnish satisfactory evidence (including reports of required tests) as to the source, kind, and quality of materials and equipment.

- C. All materials and equipment shall be stored, applied, installed, connected, erected, protected, used, cleaned, and conditioned in accordance with instructions of the applicable Supplier, except as otherwise may be provided in the Contract Documents.

6.04 *Progress Schedule*

- A. Contractor shall adhere to the Progress Schedule established in accordance with Paragraph 2.07 as it may be adjusted from time to time as provided below.
1. Contractor shall submit to Engineer for acceptance (to the extent indicated in Paragraph 2.07) proposed adjustments in the Progress Schedule that will not result in changing the Contract Times. Such adjustments will comply with any provisions of the General Requirements applicable thereto.
 2. Proposed adjustments in the Progress Schedule that will change the Contract Times shall be submitted in accordance with the requirements of Article 12. Adjustments in Contract Times may only be made by a Change Order.

6.05 *Substitutes and "Or-Equals"*

- A. Whenever an item of material or equipment is specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier, the specification or description is intended to establish the type, function, appearance, and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent, or "or-equal" item or no substitution is permitted, other items of material or equipment or material or equipment of other Suppliers may be submitted to Engineer for review under the circumstances described below.
1. *"Or-Equal" Items:* If in Engineer's sole discretion an item of material or equipment proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, it may be considered by Engineer as an "or-equal" item, in which case review and approval of the proposed item may, in Engineer's sole discretion, be accomplished without compliance with some or all of the requirements for approval of proposed substitute items. For the purposes of this Paragraph 6.05.A.1, a proposed item of material or equipment will be considered functionally equal to an item so named if:
 - a. in the exercise of reasonable judgment Engineer determines that:
 - 1) it is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics;
 - 2) it will reliably perform at least equally well the function and achieve the results imposed by the design concept of the completed Project as a functioning whole; and
 - 3) it has a proven record of performance and availability of responsive service.
 - b. Contractor certifies that, if approved and incorporated into the Work:

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- 1) there will be no increase in cost to the Owner or increase in Contract Times; and
- 2) it will conform substantially to the detailed requirements of the item named in the Contract Documents.

2. *Substitute Items:*

- a. If in Engineer's sole discretion an item of material or equipment proposed by Contractor does not qualify as an "or-equal" item under Paragraph 6.05.A.1, it will be considered a proposed substitute item.
- b. Contractor shall submit sufficient information as provided below to allow Engineer to determine if the item of material or equipment proposed is essentially equivalent to that named and an acceptable substitute therefor. Requests for review of proposed substitute items of material or equipment will not be accepted by Engineer from anyone other than Contractor.
- c. The requirements for review by Engineer will be as set forth in Paragraph 6.05.A.2.d, as supplemented by the General Requirements, and as Engineer may decide is appropriate under the circumstances.
- d. Contractor shall make written application to Engineer for review of a proposed substitute item of material or equipment that Contractor seeks to furnish or use. The application:
 - 1) shall certify that the proposed substitute item will:
 - a) perform adequately the functions and achieve the results called for by the general design,
 - b) be similar in substance to that specified, and
 - c) be suited to the same use as that specified;
 - 2) will state:
 - a) the extent, if any, to which the use of the proposed substitute item will prejudice Contractor's achievement of Substantial Completion on time,
 - b) whether use of the proposed substitute item in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with Owner for other work on the Project) to adapt the design to the proposed substitute item, and
 - c) whether incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty;
 - 3) will identify:
 - a) all variations of the proposed substitute item from that specified, and
 - b) available engineering, sales, maintenance, repair, and replacement services; and

- 4) shall contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including costs of redesign and claims of other contractors affected by any resulting change.
- B. *Substitute Construction Methods or Procedures:* If a specific means, method, technique, sequence, or procedure of construction is expressly required by the Contract Documents, Contractor may furnish or utilize a substitute means, method, technique, sequence, or procedure of construction approved by Engineer. Contractor shall submit sufficient information to allow Engineer, in Engineer's sole discretion, to determine that the substitute proposed is equivalent to that expressly called for by the Contract Documents. The requirements for review by Engineer will be similar to those provided in Paragraph 6.05.A.2.
- C. *Engineer's Evaluation:* Engineer will be allowed a reasonable time within which to evaluate each proposal or submittal made pursuant to Paragraphs 6.05.A and 6.05.B. Engineer may require Contractor to furnish additional data about the proposed substitute item. Engineer will be the sole judge of acceptability. No "or equal" or substitute will be ordered, installed or utilized until Engineer's review is complete, which will be evidenced by a Change Order in the case of a substitute and an approved Shop Drawing for an "or equal." Engineer will advise Contractor in writing of any negative determination.
- D. *Special Guarantee:* Owner may require Contractor to furnish at Contractor's expense a special performance guarantee or other surety with respect to any substitute.
- E. *Engineer's Cost Reimbursement:* Engineer will record Engineer's costs in evaluating a substitute proposed or submitted by Contractor pursuant to Paragraphs 6.05.A.2 and 6.05.B. Whether or not Engineer approves a substitute so proposed or submitted by Contractor, Contractor shall reimburse Owner for the reasonable charges of Engineer for evaluating each such proposed substitute. Contractor shall also reimburse Owner for the reasonable charges of Engineer for making changes in the Contract Documents (or in the provisions of any other direct contract with Owner) resulting from the acceptance of each proposed substitute.
- F. *Contractor's Expense:* Contractor shall provide all data in support of any proposed substitute or "or-equal" at Contractor's expense.

6.06 Concerning Subcontractors, Suppliers, and Others

- A. Contractor shall not employ any Subcontractor, Supplier, or other individual or entity (including those acceptable to Owner as indicated in Paragraph 6.06.B), whether initially or as a replacement, against whom Owner may have reasonable objection. Contractor shall not be required to employ any Subcontractor, Supplier, or other individual or entity to furnish or perform any of the Work against whom Contractor has reasonable objection.
- B. If the Supplementary Conditions require the identity of certain Subcontractors, Suppliers, or other individuals or entities to be submitted to Owner in advance for acceptance by Owner by a specified date prior to the Effective Date of the Agreement, and if Contractor has submitted a list thereof in accordance with the Supplementary Conditions, Owner's acceptance (either in writing or by failing to make written objection thereto by the date indicated for acceptance or objection in the Bidding Documents or the Contract Documents) of any such Subcontractor, Supplier, or other individual or entity so identified may be revoked on the basis of reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor, Supplier, or other individual or entity, and the Contract Price will be adjusted by the difference in the cost occasioned by such replacement, and an

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appropriate Change Order will be issued. No acceptance by Owner of any such Subcontractor, Supplier, or other individual or entity, whether initially or as a replacement, shall constitute a waiver of any right of Owner or Engineer to reject defective Work.

- C. Contractor shall be fully responsible to Owner and Engineer for all acts and omissions of the Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work just as Contractor is responsible for Contractor's own acts and omissions. Nothing in the Contract Documents:
1. shall create for the benefit of any such Subcontractor, Supplier, or other individual or entity any contractual relationship between Owner or Engineer and any such Subcontractor, Supplier or other individual or entity; nor
 2. shall create any obligation on the part of Owner or Engineer to pay or to see to the payment of any moneys due any such Subcontractor, Supplier, or other individual or entity except as may otherwise be required by Laws and Regulations.
- D. Contractor shall be solely responsible for scheduling and coordinating the Work of Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work under a direct or indirect contract with Contractor.
- E. Contractor shall require all Subcontractors, Suppliers, and such other individuals or entities performing or furnishing any of the Work to communicate with Engineer through Contractor.
- F. The divisions and sections of the Specifications and the identifications of any Drawings shall not control Contractor in dividing the Work among Subcontractors or Suppliers or delineating the Work to be performed by any specific trade.
- G. All Work performed for Contractor by a Subcontractor or Supplier will be pursuant to an appropriate agreement between Contractor and the Subcontractor or Supplier which specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract Documents for the benefit of Owner and Engineer. Whenever any such agreement is with a Subcontractor or Supplier who is listed as a loss payee on the property insurance provided in Paragraph 5.06, the agreement between the Contractor and the Subcontractor or Supplier will contain provisions whereby the Subcontractor or Supplier waives all rights against Owner, Contractor, Engineer, and all other individuals or entities identified in the Supplementary Conditions to be listed as insureds or loss payees (and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them) for all losses and damages caused by, arising out of, relating to, or resulting from any of the perils or causes of loss covered by such policies and any other property insurance applicable to the Work. If the insurers on any such policies require separate waiver forms to be signed by any Subcontractor or Supplier, Contractor will obtain the same.

6.07 *Patent Fees and Royalties*

- A. Contractor shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product, or device which is the subject of patent rights or copyrights held by others. If a particular invention, design, process, product, or device is specified in the Contract Documents for use in the performance of the Work and if, to the actual knowledge of Owner or Engineer, its use is subject to patent rights or copyrights

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calling for the payment of any license fee or royalty to others, the existence of such rights shall be disclosed by Owner in the Contract Documents.

- B. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, and its officers, directors, members, partners, employees, agents, consultants, and subcontractors from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device specified in the Contract Documents, but not identified as being subject to payment of any license fee or royalty to others required by patent rights or copyrights.
- C. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device not specified in the Contract Documents.

6.08 *Permits*

- A. Unless otherwise provided in the Supplementary Conditions, Contractor shall obtain and pay for all construction permits and licenses. Owner shall assist Contractor, when necessary, in obtaining such permits and licenses. Contractor shall pay all governmental charges and inspection fees necessary for the prosecution of the Work which are applicable at the time of opening of Bids, or, if there are no Bids, on the Effective Date of the Agreement. Owner shall pay all charges of utility owners for connections for providing permanent service to the Work.

6.09 *Laws and Regulations*

- A. Contractor shall give all notices required by and shall comply with all Laws and Regulations applicable to the performance of the Work. Except where otherwise expressly required by applicable Laws and Regulations, neither Owner nor Engineer shall be responsible for monitoring Contractor's compliance with any Laws or Regulations.
- B. If Contractor performs any Work knowing or having reason to know that it is contrary to Laws or Regulations, Contractor shall bear all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such Work. However, it shall not be Contractor's responsibility to make certain that the Specifications and Drawings are in accordance with Laws and Regulations, but this shall not relieve Contractor of Contractor's obligations under Paragraph 3.03.
- C. Changes in Laws or Regulations not known at the time of opening of Bids (or, on the Effective Date of the Agreement if there were no Bids) having an effect on the cost or time of performance of the Work shall be the subject of an adjustment in Contract Price or Contract Times. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefor as provided in Paragraph 10.05.

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6.10 *Taxes*

- A. Contractor shall pay all sales, consumer, use, and other similar taxes required to be paid by Contractor in accordance with the Laws and Regulations of the place of the Project which are applicable during the performance of the Work.

6.11 *Use of Site and Other Areas*

A. *Limitation on Use of Site and Other Areas:*

1. Contractor shall confine construction equipment, the storage of materials and equipment, and the operations of workers to the Site and other areas permitted by Laws and Regulations and shall not unreasonably encumber the Site and other areas with construction equipment or other materials or equipment. Contractor shall assume full responsibility for any damage to any such land or area, or to the owner or occupant thereof, or of any adjacent land or areas resulting from the performance of the Work.
2. Should any claim be made by any such owner or occupant because of the performance of the Work, Contractor shall promptly settle with such other party by negotiation or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law.
3. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any claim or action, legal or equitable, brought by any such owner or occupant against Owner, Engineer, or any other party indemnified hereunder to the extent caused by or based upon Contractor's performance of the Work.

- B. *Removal of Debris During Performance of the Work:* During the progress of the Work Contractor shall keep the Site and other areas free from accumulations of waste materials, rubbish, and other debris. Removal and disposal of such waste materials, rubbish, and other debris shall conform to applicable Laws and Regulations.

- C. *Cleaning:* Prior to Substantial Completion of the Work Contractor shall clean the Site and the Work and make it ready for utilization by Owner. At the completion of the Work Contractor shall remove from the Site all tools, appliances, construction equipment and machinery, and surplus materials and shall restore to original condition all property not designated for alteration by the Contract Documents.

- D. *Loading Structures:* Contractor shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall Contractor subject any part of the Work or adjacent property to stresses or pressures that will endanger it.

6.12 *Record Documents*

- A. Contractor shall maintain in a safe place at the Site one record copy of all Drawings, Specifications, Addenda, Change Orders, Work Change Directives, Field Orders, and written interpretations and clarifications in good order and annotated to show changes made during construction. These record documents together with all approved Samples and a counterpart of all approved Shop Drawings will be

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available to Engineer for reference. Upon completion of the Work, these record documents, Samples, and Shop Drawings will be delivered to Engineer for Owner.

6.13 *Safety and Protection*

- A. Contractor shall be solely responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. Such responsibility does not relieve Subcontractors of their responsibility for the safety of persons or property in the performance of their work, nor for compliance with applicable safety Laws and Regulations. Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to:
1. all persons on the Site or who may be affected by the Work;
 2. all the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and
 3. other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.
- B. Contractor shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection. Contractor shall notify owners of adjacent property and of Underground Facilities and other utility owners when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property.
- C. Contractor shall comply with the applicable requirements of Owner's safety programs, if any. The Supplementary Conditions identify any Owner's safety programs that are applicable to the Work.
- D. Contractor shall inform Owner and Engineer of the specific requirements of Contractor's safety program with which Owner's and Engineer's employees and representatives must comply while at the Site.
- E. All damage, injury, or loss to any property referred to in Paragraph 6.13.A.2 or 6.13.A.3 caused, directly or indirectly, in whole or in part, by Contractor, any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, shall be remedied by Contractor (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of Owner or Engineer or anyone employed by any of them, or anyone for whose acts any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of Contractor or any Subcontractor, Supplier, or other individual or entity directly or indirectly employed by any of them).
- F. Contractor's duties and responsibilities for safety and for protection of the Work shall continue until such time as all the Work is completed and Engineer has issued a notice to Owner and Contractor in accordance with Paragraph 14.07.B that the Work is acceptable (except as otherwise expressly provided in connection with Substantial Completion).

6.14 *Safety Representative*

- A. Contractor shall designate a qualified and experienced safety representative at the Site whose duties and responsibilities shall be the prevention of accidents and the maintaining and supervising of safety precautions and programs.

6.15 *Hazard Communication Programs*

- A. Contractor shall be responsible for coordinating any exchange of material safety data sheets or other hazard communication information required to be made available to or exchanged between or among employers at the Site in accordance with Laws or Regulations.

6.16 *Emergencies*

- A. In emergencies affecting the safety or protection of persons or the Work or property at the Site or adjacent thereto, Contractor is obligated to act to prevent threatened damage, injury, or loss. Contractor shall give Engineer prompt written notice if Contractor believes that any significant changes in the Work or variations from the Contract Documents have been caused thereby or are required as a result thereof. If Engineer determines that a change in the Contract Documents is required because of the action taken by Contractor in response to such an emergency, a Work Change Directive or Change Order will be issued.

6.17 *Shop Drawings and Samples*

- A. Contractor shall submit Shop Drawings and Samples to Engineer for review and approval in accordance with the accepted Schedule of Submittals (as required by Paragraph 2.07). Each submittal will be identified as Engineer may require.

- 1. *Shop Drawings:*

- a. Submit number of copies specified in the General Requirements.
- b. Data shown on the Shop Drawings will be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show Engineer the services, materials, and equipment Contractor proposes to provide and to enable Engineer to review the information for the limited purposes required by Paragraph 6.17.D.

- 2. *Samples:*

- a. Submit number of Samples specified in the Specifications.
- b. Clearly identify each Sample as to material, Supplier, pertinent data such as catalog numbers, the use for which intended and other data as Engineer may require to enable Engineer to review the submittal for the limited purposes required by Paragraph 6.17.D.

- B. Where a Shop Drawing or Sample is required by the Contract Documents or the Schedule of Submittals, any related Work performed prior to Engineer's review and approval of the pertinent submittal will be at the sole expense and responsibility of Contractor.

C. Submittal Procedures:

1. Before submitting each Shop Drawing or Sample, Contractor shall have:
 - a. reviewed and coordinated each Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents;
 - b. determined and verified all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect thereto;
 - c. determined and verified the suitability of all materials offered with respect to the indicated application, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work; and
 - d. determined and verified all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto.
2. Each submittal shall bear a stamp or specific written certification that Contractor has satisfied Contractor's obligations under the Contract Documents with respect to Contractor's review and approval of that submittal.
3. With each submittal, Contractor shall give Engineer specific written notice of any variations that the Shop Drawing or Sample may have from the requirements of the Contract Documents. This notice shall be both a written communication separate from the Shop Drawings or Sample submittal; and, in addition, by a specific notation made on each Shop Drawing or Sample submitted to Engineer for review and approval of each such variation.

D. Engineer's Review:

1. Engineer will provide timely review of Shop Drawings and Samples in accordance with the Schedule of Submittals acceptable to Engineer. Engineer's review and approval will be only to determine if the items covered by the submittals will, after installation or incorporation in the Work, conform to the information given in the Contract Documents and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.
2. Engineer's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction (except where a particular means, method, technique, sequence, or procedure of construction is specifically and expressly called for by the Contract Documents) or to safety precautions or programs incident thereto. The review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.
3. Engineer's review and approval shall not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has complied with the requirements of Paragraph 6.17.C.3 and Engineer has given written approval of each such variation by specific written notation thereof incorporated in or accompanying the Shop Drawing or Sample. Engineer's review and approval shall not relieve Contractor from responsibility for complying with the requirements of Paragraph 6.17.C.1.

E. *Resubmittal Procedures:*

1. Contractor shall make corrections required by Engineer and shall return the required number of corrected copies of Shop Drawings and submit, as required, new Samples for review and approval. Contractor shall direct specific attention in writing to revisions other than the corrections called for by Engineer on previous submittals.

6.18 *Continuing the Work*

- A. Contractor shall carry on the Work and adhere to the Progress Schedule during all disputes or disagreements with Owner. No Work shall be delayed or postponed pending resolution of any disputes or disagreements, except as permitted by Paragraph 15.04 or as Owner and Contractor may otherwise agree in writing.

6.19 *Contractor's General Warranty and Guarantee*

- A. Contractor warrants and guarantees to Owner that all Work will be in accordance with the Contract Documents and will not be defective. Engineer and its officers, directors, members, partners, employees, agents, consultants, and subcontractors shall be entitled to rely on representation of Contractor's warranty and guarantee.
- B. Contractor's warranty and guarantee hereunder excludes defects or damage caused by:
 1. abuse, modification, or improper maintenance or operation by persons other than Contractor, Subcontractors, Suppliers, or any other individual or entity for whom Contractor is responsible; or
 2. normal wear and tear under normal usage.
- C. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents or a release of Contractor's obligation to perform the Work in accordance with the Contract Documents:
 1. observations by Engineer;
 2. recommendation by Engineer or payment by Owner of any progress or final payment;
 3. the issuance of a certificate of Substantial Completion by Engineer or any payment related thereto by Owner;
 4. use or occupancy of the Work or any part thereof by Owner;
 5. any review and approval of a Shop Drawing or Sample submittal or the issuance of a notice of acceptability by Engineer;
 6. any inspection, test, or approval by others; or
 7. any correction of defective Work by Owner.

6.20 *Indemnification*

- A. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the performance of the Work, provided that any such claim, cost, loss, or damage is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom but only to the extent caused by any negligent act or omission of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work or anyone for whose acts any of them may be liable .
- B. In any and all claims against Owner or Engineer or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors by any employee (or the survivor or personal representative of such employee) of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, the indemnification obligation under Paragraph 6.20.A shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for Contractor or any such Subcontractor, Supplier, or other individual or entity under workers' compensation acts, disability benefit acts, or other employee benefit acts.
- C. The indemnification obligations of Contractor under Paragraph 6.20.A shall not extend to the liability of Engineer and Engineer's officers, directors, members, partners, employees, agents, consultants and subcontractors arising out of:
 - 1. the preparation or approval of, or the failure to prepare or approve maps, Drawings, opinions, reports, surveys, Change Orders, designs, or Specifications; or
 - 2. giving directions or instructions, or failing to give them, if that is the primary cause of the injury or damage.

6.21 *Delegation of Professional Design Services*

- A. Contractor will not be required to provide professional design services unless such services are specifically required by the Contract Documents for a portion of the Work or unless such services are required to carry out Contractor's responsibilities for construction means, methods, techniques, sequences and procedures. Contractor shall not be required to provide professional services in violation of applicable law.
- B. If professional design services or certifications by a design professional related to systems, materials or equipment are specifically required of Contractor by the Contract Documents, Owner and Engineer will specify all performance and design criteria that such services must satisfy. Contractor shall cause such services or certifications to be provided by a properly licensed professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, Shop Drawings and other submittals prepared by such professional. Shop Drawings and other submittals related to the Work designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to Engineer.

- C. Owner and Engineer shall be entitled to rely upon the adequacy, accuracy and completeness of the services, certifications or approvals performed by such design professionals, provided Owner and Engineer have specified to Contractor all performance and design criteria that such services must satisfy.
- D. Pursuant to this Paragraph 6.21, Engineer's review and approval of design calculations and design drawings will be only for the limited purpose of checking for conformance with performance and design criteria given and the design concept expressed in the Contract Documents. Engineer's review and approval of Shop Drawings and other submittals (except design calculations and design drawings) will be only for the purpose stated in Paragraph 6.17.D.1.
- E. Contractor shall not be responsible for the adequacy of the performance or design criteria required by the Contract Documents.

ARTICLE 7 – OTHER WORK AT THE SITE

7.01 Related Work at Site

- A. Owner may perform other work related to the Project at the Site with Owner's employees, or through other direct contracts therefor, or have other work performed by utility owners. If such other work is not noted in the Contract Documents, then:
 - 1. written notice thereof will be given to Contractor prior to starting any such other work; and
 - 2. if Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times that should be allowed as a result of such other work, a Claim may be made therefor as provided in Paragraph 10.05.
- B. Contractor shall afford each other contractor who is a party to such a direct contract, each utility owner, and Owner, if Owner is performing other work with Owner's employees, proper and safe access to the Site, provide a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work, and properly coordinate the Work with theirs. Contractor shall do all cutting, fitting, and patching of the Work that may be required to properly connect or otherwise make its several parts come together and properly integrate with such other work. Contractor shall not endanger any work of others by cutting, excavating, or otherwise altering such work; provided, however, that Contractor may cut or alter others' work with the written consent of Engineer and the others whose work will be affected. The duties and responsibilities of Contractor under this Paragraph are for the benefit of such utility owners and other contractors to the extent that there are comparable provisions for the benefit of Contractor in said direct contracts between Owner and such utility owners and other contractors.
- C. If the proper execution or results of any part of Contractor's Work depends upon work performed by others under this Article 7, Contractor shall inspect such other work and promptly report to Engineer in writing any delays, defects, or deficiencies in such other work that render it unavailable or unsuitable for the proper execution and results of Contractor's Work. Contractor's failure to so report will constitute an acceptance of such other work as fit and proper for integration with Contractor's Work except for latent defects and deficiencies in such other work.

7.02 Coordination

- A. If Owner intends to contract with others for the performance of other work on the Project at the Site, the following will be set forth in Supplementary Conditions:

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1. the individual or entity who will have authority and responsibility for coordination of the activities among the various contractors will be identified;
 2. the specific matters to be covered by such authority and responsibility will be itemized; and
 3. the extent of such authority and responsibilities will be provided.
- B. Unless otherwise provided in the Supplementary Conditions, Owner shall have sole authority and responsibility for such coordination.

7.03 *Legal Relationships*

- A. Paragraphs 7.01.A and 7.02 are not applicable for utilities not under the control of Owner.
- B. Each other direct contract of Owner under Paragraph 7.01.A shall provide that the other contractor is liable to Owner and Contractor for the reasonable direct delay and disruption costs incurred by Contractor as a result of the other contractor's wrongful actions or inactions.
- C. Contractor shall be liable to Owner and any other contractor under direct contract to Owner for the reasonable direct delay and disruption costs incurred by such other contractor as a result of Contractor's wrongful action or inactions.

ARTICLE 8 – OWNER'S RESPONSIBILITIES

8.01 *Communications to Contractor*

- A. Except as otherwise provided in these General Conditions, Owner shall issue all communications to Contractor through Engineer.

8.02 *Replacement of Engineer*

- A. In case of termination of the employment of Engineer, Owner shall appoint an engineer to whom Contractor makes no reasonable objection, whose status under the Contract Documents shall be that of the former Engineer.

8.03 *Furnish Data*

- A. Owner shall promptly furnish the data required of Owner under the Contract Documents.

8.04 *Pay When Due*

- A. Owner shall make payments to Contractor when they are due as provided in Paragraphs 14.02.C and 14.07.C.

8.05 *Lands and Easements; Reports and Tests*

- A. Owner's duties with respect to providing lands and easements and providing engineering surveys to establish reference points are set forth in Paragraphs 4.01 and 4.05. Paragraph 4.02 refers to Owner's identifying and making available to Contractor copies of reports of explorations and tests of subsurface

conditions and drawings of physical conditions relating to existing surface or subsurface structures at the Site.

8.06 *Insurance*

A. Owner's responsibilities, if any, with respect to purchasing and maintaining liability and property insurance are set forth in Article 5.

8.07 *Change Orders*

A. Owner is obligated to execute Change Orders as indicated in Paragraph 10.03.

8.08 *Inspections, Tests, and Approvals*

A. Owner's responsibility with respect to certain inspections, tests, and approvals is set forth in Paragraph 13.03.B.

8.09 *Limitations on Owner's Responsibilities*

A. The Owner shall not supervise, direct, or have control or authority over, nor be responsible for, Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Owner will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

8.10 *Undisclosed Hazardous Environmental Condition*

A. Owner's responsibility in respect to an undisclosed Hazardous Environmental Condition is set forth in Paragraph 4.06.

8.11 *Evidence of Financial Arrangements*

A. Upon request of Contractor, Owner shall furnish Contractor reasonable evidence that financial arrangements have been made to satisfy Owner's obligations under the Contract Documents.

8.12 *Compliance with Safety Program*

A. While at the Site, Owner's employees and representatives shall comply with the specific applicable requirements of Contractor's safety programs of which Owner has been informed pursuant to Paragraph 6.13.D.

ARTICLE 9 – ENGINEER'S STATUS DURING CONSTRUCTION

9.01 *Owner's Representative*

A. Engineer will be Owner's representative during the construction period. The duties and responsibilities and the limitations of authority of Engineer as Owner's representative during construction are set forth in the Contract Documents.

9.02 *Visits to Site*

- A. Engineer will make visits to the Site at intervals appropriate to the various stages of construction as Engineer deems necessary in order to observe as an experienced and qualified design professional the progress that has been made and the quality of the various aspects of Contractor's executed Work. Based on information obtained during such visits and observations, Engineer, for the benefit of Owner, will determine, in general, if the Work is proceeding in accordance with the Contract Documents. Engineer will not be required to make exhaustive or continuous inspections on the Site to check the quality or quantity of the Work. Engineer's efforts will be directed toward providing for Owner a greater degree of confidence that the completed Work will conform generally to the Contract Documents. On the basis of such visits and observations, Engineer will keep Owner informed of the progress of the Work and will endeavor to guard Owner against defective Work.
- B. Engineer's visits and observations are subject to all the limitations on Engineer's authority and responsibility set forth in Paragraph 9.09. Particularly, but without limitation, during or as a result of Engineer's visits or observations of Contractor's Work, Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work.

9.03 *Project Representative*

- A. If Owner and Engineer agree, Engineer will furnish a Resident Project Representative to assist Engineer in providing more extensive observation of the Work. The authority and responsibilities of any such Resident Project Representative and assistants will be as provided in the Supplementary Conditions, and limitations on the responsibilities thereof will be as provided in Paragraph 9.09. If Owner designates another representative or agent to represent Owner at the Site who is not Engineer's consultant, agent or employee, the responsibilities and authority and limitations thereon of such other individual or entity will be as provided in the Supplementary Conditions.

9.04 *Authorized Variations in Work*

- A. Engineer may authorize minor variations in the Work from the requirements of the Contract Documents which do not involve an adjustment in the Contract Price or the Contract Times and are compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. These may be accomplished by a Field Order and will be binding on Owner and also on Contractor, who shall perform the Work involved promptly. If Owner or Contractor believes that a Field Order justifies an adjustment in the Contract Price or Contract Times, or both, and the parties are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefor as provided in Paragraph 10.05.

9.05 *Rejecting Defective Work*

- A. Engineer will have authority to reject Work which Engineer believes to be defective, or that Engineer believes will not produce a completed Project that conforms to the Contract Documents or that will prejudice the integrity of the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Engineer will also have authority to require special inspection or testing of the Work as provided in Paragraph 13.04, whether or not the Work is fabricated, installed, or completed.

9.06 *Shop Drawings, Change Orders and Payments*

- A. In connection with Engineer's authority, and limitations thereof, as to Shop Drawings and Samples, see Paragraph 6.17.
- B. In connection with Engineer's authority, and limitations thereof, as to design calculations and design drawings submitted in response to a delegation of professional design services, if any, see Paragraph 6.21.
- C. In connection with Engineer's authority as to Change Orders, see Articles 10, 11, and 12.
- D. In connection with Engineer's authority as to Applications for Payment, see Article 14.

9.07 *Determinations for Unit Price Work*

- A. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor. Engineer will review with Contractor the Engineer's preliminary determinations on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise). Engineer's written decision thereon will be final and binding (except as modified by Engineer to reflect changed factual conditions or more accurate data) upon Owner and Contractor, subject to the provisions of Paragraph 10.05.

9.08 *Decisions on Requirements of Contract Documents and Acceptability of Work*

- A. Engineer will be the initial interpreter of the requirements of the Contract Documents and judge of the acceptability of the Work thereunder. All matters in question and other matters between Owner and Contractor arising prior to the date final payment is due relating to the acceptability of the Work, and the interpretation of the requirements of the Contract Documents pertaining to the performance of the Work, will be referred initially to Engineer in writing within 30 days of the event giving rise to the question.
- B. Engineer will, with reasonable promptness, render a written decision on the issue referred. If Owner or Contractor believes that any such decision entitles them to an adjustment in the Contract Price or Contract Times or both, a Claim may be made under Paragraph 10.05. The date of Engineer's decision shall be the date of the event giving rise to the issues referenced for the purposes of Paragraph 10.05.B.
- C. Engineer's written decision on the issue referred will be final and binding on Owner and Contractor, subject to the provisions of Paragraph 10.05.
- D. When functioning as interpreter and judge under this Paragraph 9.08, Engineer will not show partiality to Owner or Contractor and will not be liable in connection with any interpretation or decision rendered in good faith in such capacity.

9.09 *Limitations on Engineer's Authority and Responsibilities*

- A. Neither Engineer's authority or responsibility under this Article 9 or under any other provision of the Contract Documents nor any decision made by Engineer in good faith either to exercise or not exercise such authority or responsibility or the undertaking, exercise, or performance of any authority or responsibility by Engineer shall create, impose, or give rise to any duty in contract, tort, or otherwise owed by Engineer to Contractor, any Subcontractor, any Supplier, any other individual or entity, or to any surety for or employee or agent of any of them.

- B. Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Engineer will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.
- C. Engineer will not be responsible for the acts or omissions of Contractor or of any Subcontractor, any Supplier, or of any other individual or entity performing any of the Work.
- D. Engineer's review of the final Application for Payment and accompanying documentation and all maintenance and operating instructions, schedules, guarantees, bonds, certificates of inspection, tests and approvals, and other documentation required to be delivered by Paragraph 14.07.A will only be to determine generally that their content complies with the requirements of, and in the case of certificates of inspections, tests, and approvals that the results certified indicate compliance with, the Contract Documents.
- E. The limitations upon authority and responsibility set forth in this Paragraph 9.09 shall also apply to the Resident Project Representative, if any, and assistants, if any.

9.10 *Compliance with Safety Program*

- A. While at the Site, Engineer's employees and representatives shall comply with the specific applicable requirements of Contractor's safety programs of which Engineer has been informed pursuant to Paragraph 6.13.D.

ARTICLE 10 – CHANGES IN THE WORK; CLAIMS

10.01 *Authorized Changes in the Work*

- A. Without invalidating the Contract and without notice to any surety, Owner may, at any time or from time to time, order additions, deletions, or revisions in the Work by a Change Order, or a Work Change Directive. Upon receipt of any such document, Contractor shall promptly proceed with the Work involved which will be performed under the applicable conditions of the Contract Documents (except as otherwise specifically provided).
- B. If Owner and Contractor are unable to agree on entitlement to, or on the amount or extent, if any, of an adjustment in the Contract Price or Contract Times, or both, that should be allowed as a result of a Work Change Directive, a Claim may be made therefor as provided in Paragraph 10.05.

10.02 *Unauthorized Changes in the Work*

- A. Contractor shall not be entitled to an increase in the Contract Price or an extension of the Contract Times with respect to any work performed that is not required by the Contract Documents as amended, modified, or supplemented as provided in Paragraph 3.04, except in the case of an emergency as provided in Paragraph 6.16 or in the case of uncovering Work as provided in Paragraph 13.04.D.

10.03 *Execution of Change Orders*

- A. Owner and Contractor shall execute appropriate Change Orders recommended by Engineer covering:

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1. changes in the Work which are: (i) ordered by Owner pursuant to Paragraph 10.01.A, (ii) required because of acceptance of defective Work under Paragraph 13.08.A or Owner's correction of defective Work under Paragraph 13.09, or (iii) agreed to by the parties;
2. changes in the Contract Price or Contract Times which are agreed to by the parties, including any undisputed sum or amount of time for Work actually performed in accordance with a Work Change Directive; and
3. changes in the Contract Price or Contract Times which embody the substance of any written decision rendered by Engineer pursuant to Paragraph 10.05; provided that, in lieu of executing any such Change Order, an appeal may be taken from any such decision in accordance with the provisions of the Contract Documents and applicable Laws and Regulations, but during any such appeal, Contractor shall carry on the Work and adhere to the Progress Schedule as provided in Paragraph 6.18.A.

10.04 *Notification to Surety*

- A. If the provisions of any bond require notice to be given to a surety of any change affecting the general scope of the Work or the provisions of the Contract Documents (including, but not limited to, Contract Price or Contract Times), the giving of any such notice will be Contractor's responsibility. The amount of each applicable bond will be adjusted to reflect the effect of any such change.

10.05 *Claims*

- A. *Engineer's Decision Required:* All Claims, except those waived pursuant to Paragraph 14.09, shall be referred to the Engineer for decision. A decision by Engineer shall be required as a condition precedent to any exercise by Owner or Contractor of any rights or remedies either may otherwise have under the Contract Documents or by Laws and Regulations in respect of such Claims.
- B. *Notice:* Written notice stating the general nature of each Claim shall be delivered by the claimant to Engineer and the other party to the Contract promptly (but in no event later than 30 days) after the start of the event giving rise thereto. The responsibility to substantiate a Claim shall rest with the party making the Claim. Notice of the amount or extent of the Claim, with supporting data shall be delivered to the Engineer and the other party to the Contract within 60 days after the start of such event (unless Engineer allows additional time for claimant to submit additional or more accurate data in support of such Claim). A Claim for an adjustment in Contract Price shall be prepared in accordance with the provisions of Paragraph 12.01.B. A Claim for an adjustment in Contract Times shall be prepared in accordance with the provisions of Paragraph 12.02.B. Each Claim shall be accompanied by claimant's written statement that the adjustment claimed is the entire adjustment to which the claimant believes it is entitled as a result of said event. The opposing party shall submit any response to Engineer and the claimant within 30 days after receipt of the claimant's last submittal (unless Engineer allows additional time).
- C. *Engineer's Action:* Engineer will review each Claim and, within 30 days after receipt of the last submittal of the claimant or the last submittal of the opposing party, if any, take one of the following actions in writing:
 1. deny the Claim in whole or in part;
 2. approve the Claim; or

3. notify the parties that the Engineer is unable to resolve the Claim if, in the Engineer's sole discretion, it would be inappropriate for the Engineer to do so. For purposes of further resolution of the Claim, such notice shall be deemed a denial.
- D. In the event that Engineer does not take action on a Claim within said 30 days, the Claim shall be deemed denied.
- E. Engineer's written action under Paragraph 10.05.C or denial pursuant to Paragraphs 10.05.C.3 or 10.05.D will be final and binding upon Owner and Contractor, unless Owner or Contractor invoke the dispute resolution procedure set forth in Article 16 within 30 days of such action or denial.
- F. No Claim for an adjustment in Contract Price or Contract Times will be valid if not submitted in accordance with this Paragraph 10.05.

ARTICLE 11 – COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK

11.01 *Cost of the Work*

- A. *Costs Included:* The term Cost of the Work means the sum of all costs, except those excluded in Paragraph 11.01.B, necessarily incurred and paid by Contractor in the proper performance of the Work. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, the costs to be reimbursed to Contractor will be only those additional or incremental costs required because of the change in the Work or because of the event giving rise to the Claim. Except as otherwise may be agreed to in writing by Owner, such costs shall be in amounts no higher than those prevailing in the locality of the Project, shall not include any of the costs itemized in Paragraph 11.01.B, and shall include only the following items:
 1. Payroll costs for employees in the direct employ of Contractor in the performance of the Work under schedules of job classifications agreed upon by Owner and Contractor. Such employees shall include, without limitation, superintendents, foremen, and other personnel employed full time on the Work. Payroll costs for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the Work. Payroll costs shall include, but not be limited to, salaries and wages plus the cost of fringe benefits, which shall include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, bonuses, sick leave, vacation and holiday pay applicable thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, shall be included in the above to the extent authorized by Owner.
 2. Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts shall accrue to Contractor unless Owner deposits funds with Contractor with which to make payments, in which case the cash discounts shall accrue to Owner. All trade discounts, rebates and refunds and returns from sale of surplus materials and equipment shall accrue to Owner, and Contractor shall make provisions so that they may be obtained.
 3. Payments made by Contractor to Subcontractors for Work performed by Subcontractors. If required by Owner, Contractor shall obtain competitive bids from subcontractors acceptable to Owner and Contractor and shall deliver such bids to Owner, who will then determine, with the advice of Engineer, which bids, if any, will be acceptable. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work plus a fee, the Subcontractor's Cost of the Work and fee

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shall be determined in the same manner as Contractor's Cost of the Work and fee as provided in this Paragraph 11.01.

4. Costs of special consultants (including but not limited to engineers, architects, testing laboratories, surveyors, attorneys, and accountants) employed for services specifically related to the Work.
5. Supplemental costs including the following:
 - a. The proportion of necessary transportation, travel, and subsistence expenses of Contractor's employees incurred in discharge of duties connected with the Work.
 - b. Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office, and temporary facilities at the Site, and hand tools not owned by the workers, which are consumed in the performance of the Work, and cost, less market value, of such items used but not consumed which remain the property of Contractor.
 - c. Rentals of all construction equipment and machinery, and the parts thereof whether rented from Contractor or others in accordance with rental agreements approved by Owner with the advice of Engineer, and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs shall be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts shall cease when the use thereof is no longer necessary for the Work.
 - d. Sales, consumer, use, and other similar taxes related to the Work, and for which Contractor is liable, as imposed by Laws and Regulations.
 - e. Deposits lost for causes other than negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.
 - f. Losses and damages (and related expenses) caused by damage to the Work, not compensated by insurance or otherwise, sustained by Contractor in connection with the performance of the Work (except losses and damages within the deductible amounts of property insurance established in accordance with Paragraph 5.06.D), provided such losses and damages have resulted from causes other than the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses shall include settlements made with the written consent and approval of Owner. No such losses, damages, and expenses shall be included in the Cost of the Work for the purpose of determining Contractor's fee.
 - g. The cost of utilities, fuel, and sanitary facilities at the Site.
 - h. Minor expenses such as telegrams, long distance telephone calls, telephone service at the Site, express and courier services, and similar petty cash items in connection with the Work.
 - i. The costs of premiums for all bonds and insurance Contractor is required by the Contract Documents to purchase and maintain.

B. *Costs Excluded:* The term Cost of the Work shall not include any of the following items:

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1. Payroll costs and other compensation of Contractor's officers, executives, principals (of partnerships and sole proprietorships), general managers, safety managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks, and other personnel employed by Contractor, whether at the Site or in Contractor's principal or branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in Paragraph 11.01.A.1 or specifically covered by Paragraph 11.01.A.4, all of which are to be considered administrative costs covered by the Contractor's fee.
 2. Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.
 3. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.
 4. Costs due to the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.
 5. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraphs 11.01.A.
- C. *Contractor's Fee:* When all the Work is performed on the basis of cost-plus, Contractor's fee shall be determined as set forth in the Agreement. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, Contractor's fee shall be determined as set forth in Paragraph 12.01.C.
- D. *Documentation:* Whenever the Cost of the Work for any purpose is to be determined pursuant to Paragraphs 11.01.A and 11.01.B, Contractor will establish and maintain records thereof in accordance with generally accepted accounting practices and submit in a form acceptable to Engineer an itemized cost breakdown together with supporting data.

11.02 Allowances

- A. It is understood that Contractor has included in the Contract Price all allowances so named in the Contract Documents and shall cause the Work so covered to be performed for such sums and by such persons or entities as may be acceptable to Owner and Engineer.
- B. *Cash Allowances:*
1. Contractor agrees that:
 - a. the cash allowances include the cost to Contractor (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the Site, and all applicable taxes; and
 - b. Contractor's costs for unloading and handling on the Site, labor, installation, overhead, profit, and other expenses contemplated for the cash allowances have been included in the Contract Price and not in the allowances, and no demand for additional payment on account of any of the foregoing will be valid.

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C. *Contingency Allowance:*

1. Contractor agrees that a contingency allowance, if any, is for the sole use of Owner to cover unanticipated costs.

D. Prior to final payment, an appropriate Change Order will be issued as recommended by Engineer to reflect actual amounts due Contractor on account of Work covered by allowances, and the Contract Price shall be correspondingly adjusted.

11.03 *Unit Price Work*

A. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the unit price for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement.

B. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Determinations of the actual quantities and classifications of Unit Price Work performed by Contractor will be made by Engineer subject to the provisions of Paragraph 9.07.

C. Each unit price will be deemed to include an amount considered by Contractor to be adequate to cover Contractor's overhead and profit for each separately identified item.

D. Owner or Contractor may make a Claim for an adjustment in the Contract Price in accordance with Paragraph 10.05 if:

1. the quantity of any item of Unit Price Work performed by Contractor differs materially and significantly from the estimated quantity of such item indicated in the Agreement; and
2. there is no corresponding adjustment with respect to any other item of Work; and
3. Contractor believes that Contractor is entitled to an increase in Contract Price as a result of having incurred additional expense or Owner believes that Owner is entitled to a decrease in Contract Price and the parties are unable to agree as to the amount of any such increase or decrease.

ARTICLE 12 – CHANGE OF CONTRACT PRICE; CHANGE OF CONTRACT TIMES

12.01 *Change of Contract Price*

A. The Contract Price may only be changed by a Change Order. Any Claim for an adjustment in the Contract Price shall be based on written notice submitted by the party making the Claim to the Engineer and the other party to the Contract in accordance with the provisions of Paragraph 10.05.

B. The value of any Work covered by a Change Order or of any Claim for an adjustment in the Contract Price will be determined as follows:

1. where the Work involved is covered by unit prices contained in the Contract Documents, by application of such unit prices to the quantities of the items involved (subject to the provisions of Paragraph 11.03); or

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2. where the Work involved is not covered by unit prices contained in the Contract Documents, by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with Paragraph 12.01.C.2); or
3. where the Work involved is not covered by unit prices contained in the Contract Documents and agreement to a lump sum is not reached under Paragraph 12.01.B.2, on the basis of the Cost of the Work (determined as provided in Paragraph 11.01) plus a Contractor's fee for overhead and profit (determined as provided in Paragraph 12.01.C).

C. *Contractor's Fee:* The Contractor's fee for overhead and profit shall be determined as follows:

1. a mutually acceptable fixed fee; or
2. if a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:
 - a. for costs incurred under Paragraphs 11.01.A.1 and 11.01.A.2, the Contractor's fee shall be 15 percent;
 - b. for costs incurred under Paragraph 11.01.A.3, the Contractor's fee shall be five percent;
 - c. where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of Paragraphs 12.01.C.2.a and 12.01.C.2.b is that the Subcontractor who actually performs the Work, at whatever tier, will be paid a fee of 15 percent of the costs incurred by such Subcontractor under Paragraphs 11.01.A.1 and 11.01.A.2 and that any higher tier Subcontractor and Contractor will each be paid a fee of five percent of the amount paid to the next lower tier Subcontractor;
 - d. no fee shall be payable on the basis of costs itemized under Paragraphs 11.01.A.4, 11.01.A.5, and 11.01.B;
 - e. the amount of credit to be allowed by Contractor to Owner for any change which results in a net decrease in cost will be the amount of the actual net decrease in cost plus a deduction in Contractor's fee by an amount equal to five percent of such net decrease; and
 - f. when both additions and credits are involved in any one change, the adjustment in Contractor's fee shall be computed on the basis of the net change in accordance with Paragraphs 12.01.C.2.a through 12.01.C.2.e, inclusive.

12.02 *Change of Contract Times*

- A. The Contract Times may only be changed by a Change Order. Any Claim for an adjustment in the Contract Times shall be based on written notice submitted by the party making the Claim to the Engineer and the other party to the Contract in accordance with the provisions of Paragraph 10.05.
- B. Any adjustment of the Contract Times covered by a Change Order or any Claim for an adjustment in the Contract Times will be determined in accordance with the provisions of this Article 12.

12.03 *Delays*

- A. Where Contractor is prevented from completing any part of the Work within the Contract Times due to delay beyond the control of Contractor, the Contract Times will be extended in an amount equal to the time lost due to such delay if a Claim is made therefor as provided in Paragraph 12.02.A. Delays beyond the control of Contractor shall include, but not be limited to, acts or neglect by Owner, acts or neglect of utility owners or other contractors performing other work as contemplated by Article 7, fires, floods, epidemics, abnormal weather conditions, or acts of God.
- B. If Owner, Engineer, or other contractors or utility owners performing other work for Owner as contemplated by Article 7, or anyone for whom Owner is responsible, delays, disrupts, or interferes with the performance or progress of the Work, then Contractor shall be entitled to an equitable adjustment in the Contract Price or the Contract Times, or both. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times.
- C. If Contractor is delayed in the performance or progress of the Work by fire, flood, epidemic, abnormal weather conditions, acts of God, acts or failures to act of utility owners not under the control of Owner, or other causes not the fault of and beyond control of Owner and Contractor, then Contractor shall be entitled to an equitable adjustment in Contract Times, if such adjustment is essential to Contractor's ability to complete the Work within the Contract Times. Such an adjustment shall be Contractor's sole and exclusive remedy for the delays described in this Paragraph 12.03.C.
- D. Owner, Engineer, and their officers, directors, members, partners, employees, agents, consultants, or subcontractors shall not be liable to Contractor for any claims, costs, losses, or damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Contractor on or in connection with any other project or anticipated project.
- E. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for delays within the control of Contractor. Delays attributable to and within the control of a Subcontractor or Supplier shall be deemed to be delays within the control of Contractor.

ARTICLE 13 – TESTS AND INSPECTIONS; CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK

13.01 *Notice of Defects*

- A. Prompt notice of all defective Work of which Owner or Engineer has actual knowledge will be given to Contractor. Defective Work may be rejected, corrected, or accepted as provided in this Article 13.

13.02 *Access to Work*

- A. Owner, Engineer, their consultants and other representatives and personnel of Owner, independent testing laboratories, and governmental agencies with jurisdictional interests will have access to the Site and the Work at reasonable times for their observation, inspection, and testing. Contractor shall provide them proper and safe conditions for such access and advise them of Contractor's safety procedures and programs so that they may comply therewith as applicable.

13.03 *Tests and Inspections*

- A. Contractor shall give Engineer timely notice of readiness of the Work for all required inspections, tests, or approvals and shall cooperate with inspection and testing personnel to facilitate required inspections or tests.
- B. Owner shall employ and pay for the services of an independent testing laboratory to perform all inspections, tests, or approvals required by the Contract Documents except:
 - 1. for inspections, tests, or approvals covered by Paragraphs 13.03.C and 13.03.D below;
 - 2. that costs incurred in connection with tests or inspections conducted pursuant to Paragraph 13.04.B shall be paid as provided in Paragraph 13.04.C; and
 - 3. as otherwise specifically provided in the Contract Documents.
- C. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested, or approved by an employee or other representative of such public body, Contractor shall assume full responsibility for arranging and obtaining such inspections, tests, or approvals, pay all costs in connection therewith, and furnish Engineer the required certificates of inspection or approval.
- D. Contractor shall be responsible for arranging and obtaining and shall pay all costs in connection with any inspections, tests, or approvals required for Owner's and Engineer's acceptance of materials or equipment to be incorporated in the Work; or acceptance of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work. Such inspections, tests, or approvals shall be performed by organizations acceptable to Owner and Engineer.
- E. If any Work (or the work of others) that is to be inspected, tested, or approved is covered by Contractor without written concurrence of Engineer, Contractor shall, if requested by Engineer, uncover such Work for observation.
- F. Uncovering Work as provided in Paragraph 13.03.E shall be at Contractor's expense unless Contractor has given Engineer timely notice of Contractor's intention to cover the same and Engineer has not acted with reasonable promptness in response to such notice.

13.04 *Uncovering Work*

- A. If any Work is covered contrary to the written request of Engineer, it must, if requested by Engineer, be uncovered for Engineer's observation and replaced at Contractor's expense.
- B. If Engineer considers it necessary or advisable that covered Work be observed by Engineer or inspected or tested by others, Contractor, at Engineer's request, shall uncover, expose, or otherwise make available for observation, inspection, or testing as Engineer may require, that portion of the Work in question, furnishing all necessary labor, material, and equipment.
- C. If it is found that the uncovered Work is defective, Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such uncovering, exposure, observation, inspection, and testing, and of satisfactory replacement or

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reconstruction (including but not limited to all costs of repair or replacement of work of others); and Owner shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount thereof, Owner may make a Claim therefor as provided in Paragraph 10.05.

- D. If the uncovered Work is not found to be defective, Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Times, or both, directly attributable to such uncovering, exposure, observation, inspection, testing, replacement, and reconstruction. If the parties are unable to agree as to the amount or extent thereof, Contractor may make a Claim therefor as provided in Paragraph 10.05.

13.05 *Owner May Stop the Work*

- A. If the Work is defective, or Contractor fails to supply sufficient skilled workers or suitable materials or equipment, or fails to perform the Work in such a way that the completed Work will conform to the Contract Documents, Owner may order Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, this right of Owner to stop the Work shall not give rise to any duty on the part of Owner to exercise this right for the benefit of Contractor, any Subcontractor, any Supplier, any other individual or entity, or any surety for, or employee or agent of any of them.

13.06 *Correction or Removal of Defective Work*

- A. Promptly after receipt of written notice, Contractor shall correct all defective Work, whether or not fabricated, installed, or completed, or, if the Work has been rejected by Engineer, remove it from the Project and replace it with Work that is not defective. Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or removal (including but not limited to all costs of repair or replacement of work of others).
- B. When correcting defective Work under the terms of this Paragraph 13.06 or Paragraph 13.07, Contractor shall take no action that would void or otherwise impair Owner's special warranty and guarantee, if any, on said Work.

13.07 *Correction Period*

- A. If within one year after the date of Substantial Completion (or such longer period of time as may be prescribed by the terms of any applicable special guarantee required by the Contract Documents) or by any specific provision of the Contract Documents, any Work is found to be defective, or if the repair of any damages to the land or areas made available for Contractor's use by Owner or permitted by Laws and Regulations as contemplated in Paragraph 6.11.A is found to be defective, Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions:
1. repair such defective land or areas; or
 2. correct such defective Work; or
 3. if the defective Work has been rejected by Owner, remove it from the Project and replace it with Work that is not defective, and

4. satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others or other land or areas resulting therefrom.
- B. If Contractor does not promptly comply with the terms of Owner's written instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the defective Work corrected or repaired or may have the rejected Work removed and replaced. All claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others) will be paid by Contractor.
- C. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications.
- D. Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and replaced under this Paragraph 13.07, the correction period hereunder with respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.
- E. Contractor's obligations under this Paragraph 13.07 are in addition to any other obligation or warranty. The provisions of this Paragraph 13.07 shall not be construed as a substitute for, or a waiver of, the provisions of any applicable statute of limitation or repose.

13.08 *Acceptance of Defective Work*

- A. If, instead of requiring correction or removal and replacement of defective Work, Owner (and, prior to Engineer's recommendation of final payment, Engineer) prefers to accept it, Owner may do so. Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) attributable to Owner's evaluation of and determination to accept such defective Work (such costs to be approved by Engineer as to reasonableness) and for the diminished value of the Work to the extent not otherwise paid by Contractor pursuant to this sentence. If any such acceptance occurs prior to Engineer's recommendation of final payment, a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work, and Owner shall be entitled to an appropriate decrease in the Contract Price, reflecting the diminished value of Work so accepted. If the parties are unable to agree as to the amount thereof, Owner may make a Claim therefor as provided in Paragraph 10.05. If the acceptance occurs after such recommendation, an appropriate amount will be paid by Contractor to Owner.

13.09 *Owner May Correct Defective Work*

- A. If Contractor fails within a reasonable time after written notice from Engineer to correct defective Work, or to remove and replace rejected Work as required by Engineer in accordance with Paragraph 13.06.A, or if Contractor fails to perform the Work in accordance with the Contract Documents, or if Contractor fails to comply with any other provision of the Contract Documents, Owner may, after seven days written notice to Contractor, correct, or remedy any such deficiency.
- B. In exercising the rights and remedies under this Paragraph 13.09, Owner shall proceed expeditiously. In connection with such corrective or remedial action, Owner may exclude Contractor from all or part of the

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Site, take possession of all or part of the Work and suspend Contractor's services related thereto, take possession of Contractor's tools, appliances, construction equipment and machinery at the Site, and incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere. Contractor shall allow Owner, Owner's representatives, agents and employees, Owner's other contractors, and Engineer and Engineer's consultants access to the Site to enable Owner to exercise the rights and remedies under this Paragraph.

- C. All claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) incurred or sustained by Owner in exercising the rights and remedies under this Paragraph 13.09 will be charged against Contractor, and a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work; and Owner shall be entitled to an appropriate decrease in the Contract Price. If the parties are unable to agree as to the amount of the adjustment, Owner may make a Claim therefor as provided in Paragraph 10.05. Such claims, costs, losses and damages will include but not be limited to all costs of repair, or replacement of work of others destroyed or damaged by correction, removal, or replacement of Contractor's defective Work.
- D. Contractor shall not be allowed an extension of the Contract Times because of any delay in the performance of the Work attributable to the exercise by Owner of Owner's rights and remedies under this Paragraph 13.09.

ARTICLE 14 – PAYMENTS TO CONTRACTOR AND COMPLETION

14.01 *Schedule of Values*

- A. The Schedule of Values established as provided in Paragraph 2.07.A will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to Engineer. Progress payments on account of Unit Price Work will be based on the number of units completed.

14.02 *Progress Payments*

A. *Applications for Payments:*

1. At least 20 days before the date established in the Agreement for each progress payment (but not more often than once a month), Contractor shall submit to Engineer for review an Application for Payment filled out and signed by Contractor covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing, the Application for Payment shall also be accompanied by a bill of sale, invoice, or other documentation warranting that Owner has received the materials and equipment free and clear of all Liens and evidence that the materials and equipment are covered by appropriate property insurance or other arrangements to protect Owner's interest therein, all of which must be satisfactory to Owner.
2. Beginning with the second Application for Payment, each Application shall include an affidavit of Contractor stating that all previous progress payments received on account of the Work have been applied on account to discharge Contractor's legitimate obligations associated with prior Applications for Payment.
3. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.

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B. Review of Applications:

1. Engineer will, within 10 days after receipt of each Application for Payment, either indicate in writing a recommendation of payment and present the Application to Owner or return the Application to Contractor indicating in writing Engineer's reasons for refusing to recommend payment. In the latter case, Contractor may make the necessary corrections and resubmit the Application.
2. Engineer's recommendation of any payment requested in an Application for Payment will constitute a representation by Engineer to Owner, based on Engineer's observations of the executed Work as an experienced and qualified design professional, and on Engineer's review of the Application for Payment and the accompanying data and schedules, that to the best of Engineer's knowledge, information and belief:
 - a. the Work has progressed to the point indicated;
 - b. the quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, the results of any subsequent tests called for in the Contract Documents, a final determination of quantities and classifications for Unit Price Work under Paragraph 9.07, and any other qualifications stated in the recommendation); and
 - c. the conditions precedent to Contractor's being entitled to such payment appear to have been fulfilled in so far as it is Engineer's responsibility to observe the Work.
3. By recommending any such payment Engineer will not thereby be deemed to have represented that:
 - a. inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to Engineer in the Contract Documents; or
 - b. there may not be other matters or issues between the parties that might entitle Contractor to be paid additionally by Owner or entitle Owner to withhold payment to Contractor.
4. Neither Engineer's review of Contractor's Work for the purposes of recommending payments nor Engineer's recommendation of any payment, including final payment, will impose responsibility on Engineer:
 - a. to supervise, direct, or control the Work, or
 - b. for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or
 - c. for Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work, or
 - d. to make any examination to ascertain how or for what purposes Contractor has used the moneys paid on account of the Contract Price, or

- e. to determine that title to any of the Work, materials, or equipment has passed to Owner free and clear of any Liens.
5. Engineer may refuse to recommend the whole or any part of any payment if, in Engineer's opinion, it would be incorrect to make the representations to Owner stated in Paragraph 14.02.B.2. Engineer may also refuse to recommend any such payment or, because of subsequently discovered evidence or the results of subsequent inspections or tests, revise or revoke any such payment recommendation previously made, to such extent as may be necessary in Engineer's opinion to protect Owner from loss because:
- a. the Work is defective, or completed Work has been damaged, requiring correction or replacement;
 - b. the Contract Price has been reduced by Change Orders;
 - c. Owner has been required to correct defective Work or complete Work in accordance with Paragraph 13.09; or
 - d. Engineer has actual knowledge of the occurrence of any of the events enumerated in Paragraph 15.02.A.

C. Payment Becomes Due:

- 1. Ten days after presentation of the Application for Payment to Owner with Engineer's recommendation, the amount recommended will (subject to the provisions of Paragraph 14.02.D) become due, and when due will be paid by Owner to Contractor.

D. Reduction in Payment:

- 1. Owner may refuse to make payment of the full amount recommended by Engineer because:
 - a. claims have been made against Owner on account of Contractor's performance or furnishing of the Work;
 - b. Liens have been filed in connection with the Work, except where Contractor has delivered a specific bond satisfactory to Owner to secure the satisfaction and discharge of such Liens;
 - c. there are other items entitling Owner to a set-off against the amount recommended; or
 - d. Owner has actual knowledge of the occurrence of any of the events enumerated in Paragraphs 14.02.B.5.a through 14.02.B.5.c or Paragraph 15.02.A.
- 2. If Owner refuses to make payment of the full amount recommended by Engineer, Owner will give Contractor immediate written notice (with a copy to Engineer) stating the reasons for such action and promptly pay Contractor any amount remaining after deduction of the amount so withheld. Owner shall promptly pay Contractor the amount so withheld, or any adjustment thereto agreed to by Owner and Contractor, when Contractor remedies the reasons for such action.

3. Upon a subsequent determination that Owner's refusal of payment was not justified, the amount wrongfully withheld shall be treated as an amount due as determined by Paragraph 14.02.C.1 and subject to interest as provided in the Agreement.

14.03 *Contractor's Warranty of Title*

- A. Contractor warrants and guarantees that title to all Work, materials, and equipment covered by any Application for Payment, whether incorporated in the Project or not, will pass to Owner no later than the time of payment free and clear of all Liens.

14.04 *Substantial Completion*

- A. When Contractor considers the entire Work ready for its intended use Contractor shall notify Owner and Engineer in writing that the entire Work is substantially complete (except for items specifically listed by Contractor as incomplete) and request that Engineer issue a certificate of Substantial Completion.
- B. Promptly after Contractor's notification, Owner, Contractor, and Engineer shall make an inspection of the Work to determine the status of completion. If Engineer does not consider the Work substantially complete, Engineer will notify Contractor in writing giving the reasons therefor.
- C. If Engineer considers the Work substantially complete, Engineer will deliver to Owner a tentative certificate of Substantial Completion which shall fix the date of Substantial Completion. There shall be attached to the certificate a tentative list of items to be completed or corrected before final payment. Owner shall have seven days after receipt of the tentative certificate during which to make written objection to Engineer as to any provisions of the certificate or attached list. If, after considering such objections, Engineer concludes that the Work is not substantially complete, Engineer will, within 14 days after submission of the tentative certificate to Owner, notify Contractor in writing, stating the reasons therefor. If, after consideration of Owner's objections, Engineer considers the Work substantially complete, Engineer will, within said 14 days, execute and deliver to Owner and Contractor a definitive certificate of Substantial Completion (with a revised tentative list of items to be completed or corrected) reflecting such changes from the tentative certificate as Engineer believes justified after consideration of any objections from Owner.
- D. At the time of delivery of the tentative certificate of Substantial Completion, Engineer will deliver to Owner and Contractor a written recommendation as to division of responsibilities pending final payment between Owner and Contractor with respect to security, operation, safety, and protection of the Work, maintenance, heat, utilities, insurance, and warranties and guarantees. Unless Owner and Contractor agree otherwise in writing and so inform Engineer in writing prior to Engineer's issuing the definitive certificate of Substantial Completion, Engineer's aforesaid recommendation will be binding on Owner and Contractor until final payment.
- E. Owner shall have the right to exclude Contractor from the Site after the date of Substantial Completion subject to allowing Contractor reasonable access to remove its property and complete or correct items on the tentative list.

14.05 *Partial Utilization*

- A. Prior to Substantial Completion of all the Work, Owner may use or occupy any substantially completed part of the Work which has specifically been identified in the Contract Documents, or which Owner, Engineer, and Contractor agree constitutes a separately functioning and usable part of the Work that can

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be used by Owner for its intended purpose without significant interference with Contractor's performance of the remainder of the Work, subject to the following conditions:

1. Owner at any time may request Contractor in writing to permit Owner to use or occupy any such part of the Work which Owner believes to be ready for its intended use and substantially complete. If and when Contractor agrees that such part of the Work is substantially complete, Contractor, Owner, and Engineer will follow the procedures of Paragraph 14.04.A through D for that part of the Work.
2. Contractor at any time may notify Owner and Engineer in writing that Contractor considers any such part of the Work ready for its intended use and substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.
3. Within a reasonable time after either such request, Owner, Contractor, and Engineer shall make an inspection of that part of the Work to determine its status of completion. If Engineer does not consider that part of the Work to be substantially complete, Engineer will notify Owner and Contractor in writing giving the reasons therefor. If Engineer considers that part of the Work to be substantially complete, the provisions of Paragraph 14.04 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.
4. No use or occupancy or separate operation of part of the Work may occur prior to compliance with the requirements of Paragraph 5.10 regarding property insurance.

14.06 *Final Inspection*

- A. Upon written notice from Contractor that the entire Work or an agreed portion thereof is complete, Engineer will promptly make a final inspection with Owner and Contractor and will notify Contractor in writing of all particulars in which this inspection reveals that the Work is incomplete or defective. Contractor shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies.

14.07 *Final Payment*

A. *Application for Payment:*

1. After Contractor has, in the opinion of Engineer, satisfactorily completed all corrections identified during the final inspection and has delivered, in accordance with the Contract Documents, all maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance, certificates of inspection, marked-up record documents (as provided in Paragraph 6.12), and other documents, Contractor may make application for final payment following the procedure for progress payments.
2. The final Application for Payment shall be accompanied (except as previously delivered) by:
 - a. all documentation called for in the Contract Documents, including but not limited to the evidence of insurance required by Paragraph 5.04.B.6;
 - b. consent of the surety, if any, to final payment;
 - c. a list of all Claims against Owner that Contractor believes are unsettled; and

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- d. complete and legally effective releases or waivers (satisfactory to Owner) of all Lien rights arising out of or Liens filed in connection with the Work.
3. In lieu of the releases or waivers of Liens specified in Paragraph 14.07.A.2 and as approved by Owner, Contractor may furnish receipts or releases in full and an affidavit of Contractor that: (i) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (ii) all payrolls, material and equipment bills, and other indebtedness connected with the Work for which Owner might in any way be responsible, or which might in any way result in liens or other burdens on Owner's property, have been paid or otherwise satisfied. If any Subcontractor or Supplier fails to furnish such a release or receipt in full, Contractor may furnish a bond or other collateral satisfactory to Owner to indemnify Owner against any Lien.

B. *Engineer's Review of Application and Acceptance:*

1. If, on the basis of Engineer's observation of the Work during construction and final inspection, and Engineer's review of the final Application for Payment and accompanying documentation as required by the Contract Documents, Engineer is satisfied that the Work has been completed and Contractor's other obligations under the Contract Documents have been fulfilled, Engineer will, within ten days after receipt of the final Application for Payment, indicate in writing Engineer's recommendation of payment and present the Application for Payment to Owner for payment. At the same time Engineer will also give written notice to Owner and Contractor that the Work is acceptable subject to the provisions of Paragraph 14.09. Otherwise, Engineer will return the Application for Payment to Contractor, indicating in writing the reasons for refusing to recommend final payment, in which case Contractor shall make the necessary corrections and resubmit the Application for Payment.

C. *Payment Becomes Due:*

1. Thirty days after the presentation to Owner of the Application for Payment and accompanying documentation, the amount recommended by Engineer, less any sum Owner is entitled to set off against Engineer's recommendation, including but not limited to liquidated damages, will become due and will be paid by Owner to Contractor.

14.08 *Final Completion Delayed*

- A. If, through no fault of Contractor, final completion of the Work is significantly delayed, and if Engineer so confirms, Owner shall, upon receipt of Contractor's final Application for Payment (for Work fully completed and accepted) and recommendation of Engineer, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed and accepted. If the remaining balance to be held by Owner for Work not fully completed or corrected is less than the retainage stipulated in the Agreement, and if bonds have been furnished as required in Paragraph 5.01, the written consent of the surety to the payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by Contractor to Engineer with the Application for such payment. Such payment shall be made under the terms and conditions governing final payment, except that it shall not constitute a waiver of Claims.

14.09 *Waiver of Claims*

- A. The making and acceptance of final payment will constitute:

1. a waiver of all Claims by Owner against Contractor, except Claims arising from unsettled Liens, from defective Work appearing after final inspection pursuant to Paragraph 14.06, from failure to comply with the Contract Documents or the terms of any special guarantees specified therein, or from Contractor's continuing obligations under the Contract Documents; and
2. a waiver of all Claims by Contractor against Owner other than those previously made in accordance with the requirements herein and expressly acknowledged by Owner in writing as still unsettled.

ARTICLE 15 – SUSPENSION OF WORK AND TERMINATION

15.01 Owner May Suspend Work

- A. At any time and without cause, Owner may suspend the Work or any portion thereof for a period of not more than 90 consecutive days by notice in writing to Contractor and Engineer which will fix the date on which Work will be resumed. Contractor shall resume the Work on the date so fixed. Contractor shall be granted an adjustment in the Contract Price or an extension of the Contract Times, or both, directly attributable to any such suspension if Contractor makes a Claim therefor as provided in Paragraph 10.05.

15.02 Owner May Terminate for Cause

- A. The occurrence of any one or more of the following events will justify termination for cause:
 1. Contractor's persistent failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment or failure to adhere to the Progress Schedule established under Paragraph 2.07 as adjusted from time to time pursuant to Paragraph 6.04);
 2. Contractor's disregard of Laws or Regulations of any public body having jurisdiction;
 3. Contractor's repeated disregard of the authority of Engineer; or
 4. Contractor's violation in any substantial way of any provisions of the Contract Documents.
- B. If one or more of the events identified in Paragraph 15.02.A occur, Owner may, after giving Contractor (and surety) seven days written notice of its intent to terminate the services of Contractor:
 1. exclude Contractor from the Site, and take possession of the Work and of all Contractor's tools, appliances, construction equipment, and machinery at the Site, and use the same to the full extent they could be used by Contractor (without liability to Contractor for trespass or conversion);
 2. incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere; and
 3. complete the Work as Owner may deem expedient.
- C. If Owner proceeds as provided in Paragraph 15.02.B, Contractor shall not be entitled to receive any further payment until the Work is completed. If the unpaid balance of the Contract Price exceeds all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Owner arising out of or relating to completing the Work, such excess will be paid to

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Contractor. If such claims, costs, losses, and damages exceed such unpaid balance, Contractor shall pay the difference to Owner. Such claims, costs, losses, and damages incurred by Owner will be reviewed by Engineer as to their reasonableness and, when so approved by Engineer, incorporated in a Change Order. When exercising any rights or remedies under this Paragraph, Owner shall not be required to obtain the lowest price for the Work performed.

- D. Notwithstanding Paragraphs 15.02.B and 15.02.C, Contractor's services will not be terminated if Contractor begins within seven days of receipt of notice of intent to terminate to correct its failure to perform and proceeds diligently to cure such failure within no more than 30 days of receipt of said notice.
- E. Where Contractor's services have been so terminated by Owner, the termination will not affect any rights or remedies of Owner against Contractor then existing or which may thereafter accrue. Any retention or payment of moneys due Contractor by Owner will not release Contractor from liability.
- F. If and to the extent that Contractor has provided a performance bond under the provisions of Paragraph 5.01.A, the termination procedures of that bond shall supersede the provisions of Paragraphs 15.02.B and 15.02.C.

15.03 *Owner May Terminate For Convenience*

- A. Upon seven days written notice to Contractor and Engineer, Owner may, without cause and without prejudice to any other right or remedy of Owner, terminate the Contract. In such case, Contractor shall be paid for (without duplication of any items):
 - 1. completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;
 - 2. expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses;
 - 3. all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) incurred in settlement of terminated contracts with Subcontractors, Suppliers, and others; and
 - 4. reasonable expenses directly attributable to termination.
- B. Contractor shall not be paid on account of loss of anticipated profits or revenue or other economic loss arising out of or resulting from such termination.

15.04 *Contractor May Stop Work or Terminate*

- A. If, through no act or fault of Contractor, (i) the Work is suspended for more than 90 consecutive days by Owner or under an order of court or other public authority, or (ii) Engineer fails to act on any Application for Payment within 30 days after it is submitted, or (iii) Owner fails for 30 days to pay Contractor any sum finally determined to be due, then Contractor may, upon seven days written notice to Owner and Engineer, and provided Owner or Engineer do not remedy such suspension or failure within that time, terminate the Contract and recover from Owner payment on the same terms as provided in Paragraph 15.03.

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- B. In lieu of terminating the Contract and without prejudice to any other right or remedy, if Engineer has failed to act on an Application for Payment within 30 days after it is submitted, or Owner has failed for 30 days to pay Contractor any sum finally determined to be due, Contractor may, seven days after written notice to Owner and Engineer, stop the Work until payment is made of all such amounts due Contractor, including interest thereon. The provisions of this Paragraph 15.04 are not intended to preclude Contractor from making a Claim under Paragraph 10.05 for an adjustment in Contract Price or Contract Times or otherwise for expenses or damage directly attributable to Contractor's stopping the Work as permitted by this Paragraph.

ARTICLE 16 – DISPUTE RESOLUTION

16.01 Methods and Procedures

- A. Either Owner or Contractor may request mediation of any Claim submitted to Engineer for a decision under Paragraph 10.05 before such decision becomes final and binding. The mediation will be governed by the Construction Industry Mediation Rules of the American Arbitration Association in effect as of the Effective Date of the Agreement. The request for mediation shall be submitted in writing to the American Arbitration Association and the other party to the Contract. Timely submission of the request shall stay the effect of Paragraph 10.05.E.
- B. Owner and Contractor shall participate in the mediation process in good faith. The process shall be concluded within 60 days of filing of the request. The date of termination of the mediation shall be determined by application of the mediation rules referenced above.
- C. If the Claim is not resolved by mediation, Engineer's action under Paragraph 10.05.C or a denial pursuant to Paragraphs 10.05.C.3 or 10.05.D shall become final and binding 30 days after termination of the mediation unless, within that time period, Owner or Contractor:
1. elects in writing to invoke any dispute resolution process provided for in the Supplementary Conditions; or
 2. agrees with the other party to submit the Claim to another dispute resolution process; or
 3. gives written notice to the other party of the intent to submit the Claim to a court of competent jurisdiction.

ARTICLE 17 – MISCELLANEOUS

17.01 Giving Notice

- A. Whenever any provision of the Contract Documents requires the giving of written notice, it will be deemed to have been validly given if:
1. delivered in person to the individual or to a member of the firm or to an officer of the corporation for whom it is intended; or
 2. delivered at or sent by registered or certified mail, postage prepaid, to the last business address known to the giver of the notice.

17.02 *Computation of Times*

- A. When any period of time is referred to in the Contract Documents by days, it will be computed to exclude the first and include the last day of such period. If the last day of any such period falls on a Saturday or Sunday or on a day made a legal holiday by the law of the applicable jurisdiction, such day will be omitted from the computation.

17.03 *Cumulative Remedies*

- A. The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto are in addition to and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by Laws or Regulations, by special warranty or guarantee, or by other provisions of the Contract Documents. The provisions of this Paragraph will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right, and remedy to which they apply.

17.04 *Survival of Obligations*

- A. All representations, indemnifications, warranties, and guarantees made in, required by, or given in accordance with the Contract Documents, as well as all continuing obligations indicated in the Contract Documents, will survive final payment, completion, and acceptance of the Work or termination or completion of the Contract or termination of the services of Contractor.

17.05 *Controlling Law*

- A. This Contract is to be governed by the law of the state in which the Project is located.

17.06 *Headings*

- A. Article and paragraph headings are inserted for convenience only and do not constitute parts of these General Conditions.

SUPPLEMENTARY GENERAL CONDITIONS

1. THE GENERAL CONDITIONS: The General Conditions shall apply to all WORK in the Contract Documents, except as otherwise specified in the Supplementary Conditions. Requirements of the Supplementary Conditions supersede those of the General Conditions.
2. COMMENCEMENT AND COMPLETION OF WORK: The CONTRACTOR shall commence the WORK on the date indicated in the Notice of Proceed and shall diligently prosecute said WORK so as to complete the entire project and place it in use within the calendar days noted.
3. SCOPE OF THE WORK: The WORK includes the furnishing of all necessary machinery, equipment, tools, labor and other construction means, and all materials and equipment required to perform the WORK and Specifications and including the placing of the WORK into satisfactory operation.
4. LOCATION: The WORK under this Contract will be located in Peach County, Georgia as shown on the Construction Drawings.
5. NON-DISCRIMINATION: It is the policy of the Project Sponsor (OWNER) not to discriminate on the basis of age, race, sex, color, national origin or disability in its hiring and employment practices, or in admission to, access to, or operation of its programs, services and activities. With regard to all aspects of this project, the Contractor certifies and warrants it will comply with this policy.
6. Sponsors and contractors must follow the flood hazard area requirements of the Flood Disaster Protection Act of 1973 contained in 40 CFR Part 30.
7. Fire and Extended Coverage Insurance (Builder's Risk):
 - a. The Contractor shall maintain, as applicable, in an Insurance Company or Insurance Companies acceptable to the Owner, Fire, Extended Coverage and Vandalism and Malicious Mischief Insurance on buildings and structures, while in the course of construction, including foundations, additions, attachments and all permanent fixtures belonging to and constituting a part of said buildings or structures. The policy or policies shall also cover machinery if the cost of machinery is included in the Contract. The amount of insurance must at all times be at least equal to the actual cash value of the insured property. The policy shall be in the name of the Owner and the Contractor, as their interests may appear, and shall also cover the interests of all subcontractors performing work.
 - b. The Contractor shall provide the Owner with satisfactory evidence certifying that the foregoing insurance is in force; and such evidence shall include provisions that the insurance shall not be cancelled, allowed to expire or be materially changed without giving the Owner advance notice by registered mail.
 - c. Cancellation and Re-Insurance: If any insurance should be cancelled or changed by the insurance company or should any insurance expire during the period of this contract, the Contractor shall be responsible for securing other acceptable insurance to provide the coverage specified in this section to maintain continuous coverage during the life of this contract.

SUPPLEMENTARY GENERAL CONDITIONS

8. SUB-CONTRACTOR LIST: CONTRACTOR shall supply a list of all sub-contractors within seven days after bid opening.
9. EXTENSION OF TIME AND FAILURE TO COMPLETE ON TIME: Any and all extensions of time shall be in accordance with the General Conditions, except as otherwise hereinafter provided.

Failure to complete the Project on or before the stipulated completion date will result in the assessment of liquidated damages in the amount stated in the Bid.

10. CONSTRUCTION DRAWINGS: The WORK shall conform to the following construction drawings:

<u>Sheet No.</u>	<u>Description</u>
--	Title Sheet
0.1	General Notes
1.0	Fullwood Rd. Plan & Profile 1 (Sta 0+00.00 To 14+50.00)
1.1	Fullwood Rd. Plan & Profile 1 (Sta 0+00.00 To 14+50.00)
1.2	Fullwood Rd. Plan & Profile 1 (Sta 14+50.00 To 25+44.39)
2.0	Cross Sections for Profile 1 (STA 0+00 to STA 14+00)
2.1	Cross Sections for Profile 1 (STA 0+50 to STA 18+00)
2.2	Cross Sections for Profile 1 (STA 18+50 to STA 25+44)
3.0	Details & Notes
3.1	NPDES Notes

11. REPORTS AND DRAWINGS USED BY THE ENGINEER: In the preparation of Drawings and Specifications, ENGINEER has relied upon:

- Topographic Survey by Wellston Associates, 12/07/2020 and revised 01/12/2021.

12. SANITARY CONVENIENCES: The CONTRACTOR shall provide adequate sanitary conveniences for use of those employed on the WORK and their use shall be strictly enforced. Such convenience shall be made available when the first employees arrive on the site and shall be removed after the departure of the last employees from the job.

13. ENVIRONMENTAL IMPACT: The CONTRACTOR shall conduct all operations so as to minimize, to the greatest extent possible, adverse environmental impact.

- a. Noise: All equipment and machinery shall be provided with exhaust mufflers maintained in good working order so as to reduce operating noise to minimum levels.
- b. Dust/Smoke: All equipment movements shall be accompanied by a minimum of dust. Traveled surfaces and earthwork shall be maintained in a moist condition to avoid the generation of dust or the airborne movement of particulate matter under all prevailing atmospheric conditions.

Burning operations will be conducted only with written permission of the OWNER and/or appropriate regulatory agency. The CONTRACTOR shall be responsible for obtaining all permits and comply with all codes, ordinances and regulations pertaining to the burning.

SUPPLEMENTARY GENERAL CONDITIONS

- c. Traffic: Trucks shall be routed over roads which will result in the least effect on traffic and nuisance to the public. All material shall be loaded in a manner which will preclude the loss of any portion of the load in transit, including covering, if necessary.
 - d. Sedimentation: All points of concentrated runoff from rainfall shall be visually monitored to determine that no eroded material from the construction site is being deposited offsite. Measures shall be taken to promptly eliminate such a deposition if occurring, including the installation of detention basins.
 - e. Fuel & Lubrication Spills: All Spills shall be removed from the site immediately by the CONTRACTOR. No residue from the spill shall remain on site.
14. UTILITIES: Underground and aboveground utilities such as sewer, water, communication, and electric lines encountered in the WORK shall be protected from injury and maintained in service until moved or replaced as required under this Contract or by others as the case may be or abandoned as may be necessary for the proper construction and use of the new WORK.
15. ADJUSTMENT OF DISCREPANCIES: In all cases of discrepancies between the various dimensions and details shown on drawings, or between the drawings and these specifications, the more expensive construction shall be estimated before construction is started, the matter shall be submitted to the OWNER for clarification. Without such a decision, discrepancies shall be adjusted by the CONTRACTOR at his own risk and in settlement of any complications arising from such adjustment, the CONTRACTOR shall bear all of the extra expense involved.
16. RESTORATION: The CONTRACTOR shall conduct his operations so that restoration of concrete floors, walls, doors, paving, grassed slopes, etc. is complete at the time a request for final review is made by the CONTRACTOR.
17. MAINTENANCE DURING CONSTRUCTION: The CONTRACTOR shall maintain the WORK from the beginning of construction operations until final acceptance. This maintenance shall constitute continuous and effective WORK prosecuted day by day with adequate equipment and forces to the end that the site and structures thereon are kept in satisfactory condition at all times, including satisfactory signing or marking as appropriate and control of traffic where required by use of traffic control devices as required by the State in which this project is located.

Upon completion of the WORK, the CONTRACTOR shall remove all construction signs and barriers before final acceptance.

While undergoing improvements, the roads shall be kept open whenever possible to all traffic by the CONTRACTOR. The CONTRACTOR shall keep the portion of the site being used by public traffic, whenever possible, whether it be through or local traffic, in such condition that traffic will be adequately accommodated. The CONTRACTOR shall bear all costs of signs and markings as required and other maintenance WORK during construction and before the WORK is accepted and of constructing and maintaining such approaches, crossings, intersections, and other features as may be necessary without direct compensation.

Single lane closures will be allowed at the CONTRACTOR'S discretion. Flaggers, work zone signs, and work zones must be set-up and maintained in accordance with MUTCD standards. All flaggers must have a flagger training certification acceptable to GDOT.

SUPPLEMENTARY GENERAL CONDITIONS

For complete road closure, a detour plan shall be submitted to engineer three days prior to the planned closure. Detour signs and markings shall be installed in accordance with the approved detour plan prior to road closure. The Owner shall be notified at least 24-hours prior to closure of the road so that emergency services can be given adequate notification. Temporary electronic signs informing the traveling public of the road closure shall be placed in both directions two-days prior to road closure.

The Owner shall be notified immediately upon road being reopened.

18. BARRICADES, DANGER, WARNING & DETOUR SIGNS: The CONTRACTOR shall provide, erect, and maintain all necessary barricades, suitable and sufficient lights, danger signals, signs and other traffic control devices, and shall take all necessary precautions for the protection of the WORK and safety of the public. Highways and streets closed to traffic shall be protected by effective barricades, and obstructions shall be lighted during hours of darkness. Suitable warning signs shall be provided to properly control and direct traffic.

Contractor shall set up all roadway work zones and perform all traffic control in accordance with the Federal Highway Administration Manual on Uniform Traffic Control Devices for Streets and Highways (MUTCD) 2009 addition. Temporary signs may be reused, provided they are in good condition and legible. All protective devices shall be kept in a good, legible condition while in use.

As soon as construction advances to the extent that temporary barricades, and signs are no longer needed to inform the traveling public, such signs shall be promptly removed.

The cost of furnishing, erecting, maintaining, and removing protective devices will not be paid for as a separate Bid item. Where the CONTRACTOR is required to perform any of these functions, the cost thereof shall be included in the overall Bid submitted. Ownership of the temporary warning devices shall remain with the CONTRACTOR.

All workers working in Peach County Right-of-Way must wear ANSI Class II or Class III High Visibility apparel during daylight hours and ANSI Class III High Visibility apparel during non-daylight hours.

19. ACCESS FOR INSPECTION: Access for inspection shall be provided for representatives of the Federal, State, or local government agencies, suppliers, the OWNER, or the Owner's representative.
20. LIMITS OF LIABILITY: The limits of liability for the insurance required by paragraph 5.04 of the General Conditions shall provide coverage for not less than the following amounts or greater where required by Laws and Regulations:
- a. Minimum General Liability Insurance: \$2,000,000 aggregate, \$1,000,000 per occurrence
 - b. Minimum Automobile Liability Insurance: \$2,000,000 aggregate, \$1,000,000 per occurrence
 - c. Minimum Workers Compensation Insurance: \$500,000

SUPPLEMENTARY GENERAL CONDITIONS

21. Paragraph 5.06 of the General Conditions and all references thereto are not applicable to this Contract Agreement.
22. Disputes will be resolved by judicial process in the Peach County Superior Court. This dispute resolution method shall be used in lieu of the methods and procedures specified in Article 16 of the Standard General Conditions.
23. LIENS
The Contractor shall furnish the Owner the Final Affidavit attached to the contract agreement verifying all suppliers of materials, equipment and service, subcontractors, mechanics, and laborers have been paid and there are no outstanding obligations or claims of any kind for the payment of which Peach County on the above named projects might be liable for which liens arising out of this contract for which a lien could be filed. In lieu of the above, the Contractor may at his/her option furnish a bond to indemnify the Owner against all hazards of liens. Neither part nor final payment shall in any way release the Contractor from the above obligation and in the event that part or full payment has been made and any lien remains un-discharged, the Contractor shall refund to the Owner the necessary funds to discharge such a lien including all cost and attorney's fees.
24. RETAINAGE OF CONTRACTOR'S PAYMENT: The retainage shall be an amount equal to 10% of CONTRACTOR's partial pay estimate until 50% completion. Further payments shall be made in full to the CONTRACTOR and no additional amounts shall be retained unless the ENGINEER certifies that the job is not proceeding satisfactorily but amounts previously retained shall not be paid to the CONTRACTOR. At 50% completion or any time thereafter when the progress of the WORK is not satisfactory, additional amounts may be retained but in no event shall the total retainage be more than 20% of the value of the WORK completed. Upon substantial completion of the WORK, any amount retained may be paid to the CONTRACTOR. When the WORK has been substantially completed except for WORK which cannot be completed because of weather conditions, lack of materials or other reasons which in the judgment of the OWNER are valid reasons for noncompletion, the OWNER may make additional payments, retaining at all times an amount sufficient to cover the estimated cost of the WORK still to be completed.
- Partial pay estimates may include stored materials. CONTRACTOR must submit invoices and all materials must be located at the site of the WORK. Retainage will not be held on stored materials.
25. WORKER HEALTH AND SAFETY: The CONTRACTOR acknowledges all applicable rules and regulations of Occupational Safety and Health Administration (OSHA) and the State of Georgia with regard to worker health and safety. The CONTRACTOR shall also submit a job-specific Health and Safety Plan to the OWNER for their records prior to commencing WORK.
26. ACCESS ROAD DAMAGE: Any damage to the access roads or parking areas caused by the CONTRACTOR shall be repaired by the CONTRACTOR at his own expense.

END OF SECTION

SECTION 00950

PEACH COUNTY CONTRACT CONDITIONS (BID FORMS)



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Board of Commissioners

Meetings Second Tuesday

Martin H. Moseley, Jr.
 Chairman

Betty C. Hill
 Vice-Chairman

Shanita D. Bryant

Roy Lewis

Wade Yoder

Michaela Jones
 County Administrator

April H. Hodges
 Assistant County Administrator/
 County Clerk

County Officials

Kim Wilson
 Probate Judge

Joe Wilder
 Clerk of Superior Court

Terry Deese
 Sheriff

W. L. Brown
 Tax Commissioner

Kerry Rooks
 Coroner

Laurens C. Lee
 Magistrate

Greetings Prospective Supplier/Vendor,

Georgia law has made it mandatory that all private employers enroll in and use the federal E-Verify system, not only public contractors (including sub-contractors and sub-sub-contractors) providing labor to public project(s), but also those companies providing services of any kind over \$2,499.99 in value, regardless of the number of employees a contractor has. This expands the E-Verify requirement to lots of small businesses that have contracts to perform labor or services with our county. A contractor or sub-contractor may be exempt from this requirement if the contractor or sub-contractor has NO employees and does not hire nor intend to hire employees for the purpose of completing any part of the public contract.

E-Verify is a federal database that can be used to verify that an employee is authorized to work in the United States. The SAVE (Systematic Alien Verification for Entitlements Affidavit) program determines that immigration status of any person that receives a public benefit. The State of Georgia has determined that a public benefit is any contract, business license, occupational tax certificate, alcohol license, taxi permit, pawnbroker's license, billiard room license, precious metals/gems dealer's license, flea market license or insurance company license.

In keeping with compliance, we ask that you provide the following forms to do business with our agency:

- New Supplier/Vendor Information Sheet (ALL CONTRACTORS SUBMIT THIS FORM)
- Form W-9 (Taxpayer Identification Number) (ALL CONTRACTORS SUBMIT THIS FORM)
- E-Verify Affidavit (ANY CONTRACTOR PROVIDING GOODS AND LABOR/SERVICE)
- SAVE Affidavit (ANY CONTRACTOR RECEIVING PUBLIC BENEFIT OR THAT PROVIDES GOODS)
- Sub-contractor Affidavit (ANY SUB-CONTRACTOR PROVIDING GOODS AND LABOR/SERVICES)
- Certificate of Liability Insurance (ANY CONTRACTOR WHO DOES WORK ON OUR PROPERTY)
 - Minimum Liability Insurance: \$2,000,000 aggregate, \$1,000,000 per occurrence
 - Minimum Automobile Liability Insurance: \$2,000,000 aggregate, \$1,000,000 per occurrence
 - Minimum Workers Compensation Insurance: \$500,000
- Sole Proprietor Contractor Affidavit (ONLY USE IF YOU HAVE NO EMPLOYEES)
- Photo Identification (PROVIDE ONLY IF A SOLE PROPRIETOR. SEE ATTACHED LIST OF ACCEPTABLE DOCUMENTS).
- Private Employer Exemption (USE ONLY IF SOLE PROPRIETOR)

Please note that some of the forms require notarization and will be considered incomplete and not processed. You may return the forms properly completed by fax, e-mail, US Postal Service or drop it off at our office: Peach County Board of Commissioners Purchasing Office, 213 Persons Street, Fort Valley, GA 31030. If you need to register for the E-Verify program, go to www.uscis.gov and follow the instructions. If you have any questions about E-Verify or any of these forms, please call the office.

Peach County Purchasing Office



NEW VENDOR / SUPPLIER INFORMATION

COMPANY NAME: _____

CONTACT PERSON: _____ TITLE: _____

BUSINESS ADDRESS: _____

PHONE: _____ FAX: _____

EMAIL: _____

TYPE OF BUSINESS. (PLEASE CHECK ONE)

- CORPORATION
- PARTNERSHIP
- SOLE PROPRIETOR

Have you done business with Peach County in the past? (PLEASE CHECK ONE)

- YES
- NO

Do you participate in the E-Verify Program? (PLEASE CHECK ONE)

- YES
- NO

Do you have a Federal Tax ID number? (PLEASE CHECK ONE)

- YES
- NO

The information contained in this document is true to the best of my knowledge and I understand that giving false, misleading or deceptive information is considered unlawful and may be punishable by penalties of prosecution based on Georgia Law.

Signature

Date

Request for Taxpayer Identification Number and Certification

Give Form to the requester. Do not send to the IRS.

▶ Go to www.irs.gov/FormW9 for instructions and the latest information.

Print or type. See Specific Instructions on page 3.	<p>1 Name (as shown on your income tax return). Name is required on this line; do not leave this line blank.</p>	
	<p>2 Business name/disregarded entity name, if different from above</p>	
	<p>3 Check appropriate box for federal tax classification of the person whose name is entered on line 1. Check only one of the following seven boxes.</p> <p><input type="checkbox"/> Individual/sole proprietor or single-member LLC <input type="checkbox"/> C Corporation <input type="checkbox"/> S Corporation <input type="checkbox"/> Partnership <input type="checkbox"/> Trust/estate</p> <p><input type="checkbox"/> Limited liability company. Enter the tax classification (C=C corporation, S=S corporation, P=Partnership) ▶ _____</p> <p>Note: Check the appropriate box in the line above for the tax classification of the single-member owner. Do not check LLC if the LLC is classified as a single-member LLC that is disregarded from the owner unless the owner of the LLC is another LLC that is not disregarded from the owner for U.S. federal tax purposes. Otherwise, a single-member LLC that is disregarded from the owner should check the appropriate box for the tax classification of its owner.</p> <p><input type="checkbox"/> Other (see instructions) ▶ _____</p>	<p>4 Exemptions (codes apply only to certain entities, not individuals; see instructions on page 3):</p> <p>Exempt payee code (if any) _____</p> <p>Exemption from FATCA reporting code (if any) _____</p> <p><small>(Applies to accounts maintained outside the U.S.)</small></p>
	<p>5 Address (number, street, and apt. or suite no.) See instructions.</p>	<p>Requester's name and address (optional)</p>
	<p>6 City, state, and ZIP code</p>	
	<p>7 List account number(s) here (optional)</p>	

Part I Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. The TIN provided must match the name given on line 1 to avoid backup withholding. For individuals, this is generally your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the instructions for Part I, later. For other entities, it is your employer identification number (EIN). If you do not have a number, see *How to get a TIN*, later.

Note: If the account is in more than one name, see the instructions for line 1. Also see *What Name and Number To Give the Requester* for guidelines on whose number to enter.

Social security number									
-				-					
or									
Employer identification number									
-									

Part II Certification

- Under penalties of perjury, I certify that:
- The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me); and
 - I am not subject to backup withholding because: (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding; and
 - I am a U.S. citizen or other U.S. person (defined below); and
 - The FATCA code(s) entered on this form (if any) indicating that I am exempt from FATCA reporting is correct.

Certification instructions. You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and generally, payments other than interest and dividends, you are not required to sign the certification, but you must provide your correct TIN. See the instructions for Part II, later.

Sign Here	Signature of U.S. person ▶	Date ▶
------------------	----------------------------	--------

General Instructions

Section references are to the Internal Revenue Code unless otherwise noted.

Future developments. For the latest information about developments related to Form W-9 and its instructions, such as legislation enacted after they were published, go to www.irs.gov/FormW9.

Purpose of Form

An individual or entity (Form W-9 requester) who is required to file an information return with the IRS must obtain your correct taxpayer identification number (TIN) which may be your social security number (SSN), individual taxpayer identification number (ITIN), adoption taxpayer identification number (ATIN), or employer identification number (EIN), to report on an information return the amount paid to you, or other amount reportable on an information return. Examples of information returns include, but are not limited to, the following.

- Form 1099-INT (interest earned or paid)

- Form 1099-DIV (dividends, including those from stocks or mutual funds)
- Form 1099-MISC (various types of income, prizes, awards, or gross proceeds)
- Form 1099-B (stock or mutual fund sales and certain other transactions by brokers)
- Form 1099-S (proceeds from real estate transactions)
- Form 1099-K (merchant card and third party network transactions)
- Form 1098 (home mortgage interest), 1098-E (student loan interest), 1098-T (tuition)
- Form 1099-C (canceled debt)
- Form 1099-A (acquisition or abandonment of secured property)

Use Form W-9 only if you are a U.S. person (including a resident alien), to provide your correct TIN.

If you do not return Form W-9 to the requester with a TIN, you might be subject to backup withholding. See What is backup withholding, later.

Contractor Affidavit under O.C.G.A. § 13-10-91(b)(1)

CONTRACTOR E-VERIFY AFFIDAVIT

By executing this affidavit, the undersigned contractor verifies its compliance with O.C.G.A. § 13-10-91, stating affirmatively that the individual, firm or corporation which is engaged in the physical performance of services on behalf of PEACH COUNTY BOARD OF COMMISSIONERS has registered with, is authorized to use and uses the federal work authorization program commonly known as E-Verify, or any subsequent replacement program, in accordance with the applicable provisions and deadlines established in O.C.G.A. § 13-10-91. Furthermore, the undersigned contractor will continue to use the federal work authorization program throughout the contract period and the undersigned contractor will contract for the physical performance of services in satisfaction of such contract only with subcontractors who present an affidavit to the contractor with the information required by O.C.G.A. § 13-10-91(b). Contractor hereby attests that its federal work authorization user identification number and date of authorization are as follows:

Federal Work Authorization User Identification Number

Date of Authorization

Name of Contractor

Name of Project

Name of Public Employer



I hereby declare under penalty of perjury that the foregoing is true and correct. Executed on __, ____, 201__ in_ (city), (state).

Signature of Authorized Officer or Agent

Printed Name and Title of Authorized Officer or Agent

SUBSCRIBED AND SWORN BEFORE ME

ON THIS ____ DAY OF _____, 20__.

NOTARY PUBLIC

My Commission Expires:

SAVE (SYSTEMATIC ALIEN VERIFICATION FOR ENTITLEMENTS) PROGRAM AFFIDAVIT (O.C.G.A §S0- 36-1 (E)(2)

AFFIDAVIT VERIFYING STATUS FOR PUBLIC BENEFIT APPLICATION CONTRACTS

Peach County, Georgia is authorized to enter into contracts pursuant to GA. Const. Art. IX, § III Par I; OCGA § 36-10-1 through §36-10-2.2; OCGA § 36-60-14; OCGA § 36-91-1. Prior to entering in to a contract with the PEACH COUNTY BOARD OF COMMISSIONERS, by executing this affidavit under oath, I, _____, on behalf of _____

Am Stating that:

1.) _____ I am a United States citizen.

2.) _____ I am a legal permanent resident of the United States.

OR

3.) _____ I am another wise qualified alien or non-immigrant under the Federal Immigration and Nationality Act and lawfully present in the United States.

The undersigned applicant also hereby verifies that he or she is 18 years of age or older and has provided at least one (1) secure and verifiable document as verification, as required by OCGA § 50-30-1(e)(1). with this affidavit. In making the above representation under oath, I understand that any person who knowingly and willfully makes a false, fictitious or fraudulent statement or representation in an affidavit shall be guilty of a violation of Code Section 16-10-20 of the Official Code of Georgia.

Signature of Employee

Date

Printed Name

Alien Registration Number (for non-citizens)

Type of secure and verifiable document provided
(i.e. driver's license, passport, etc.)

SUBSCRIBED AND SWORN BEFORE ME
ON THIS _____ DAY OF _____, 20____.

NOTARY PUBLIC

My Commission Expires:

GEORGIA SECURITY AND IMMIGRATION COMPLIANCE ACT
(OCGA 13-10-91) SUBCONTRACTOR E-VERIFY AFFIDAVIT

SUB-CONTRACTOR' S NAME: _____

CONTRACTOR'S NAME: _____

By executing this affidavit, the undersigned Sub-Contractor verifies its compliance with OCGA § 13-10-91, stating affirmatively that the Sub-Contractor which is engaged in the physical performance of services under a contract with the Contractor identified above on behalf of PEACH COUNTY BOARD OF COMMISSIONERS has registered with and is participating in the E-Verify program in accordance with the applicability provisions and deadlines established in OCGA 13-10-91.

Federal Work Authorization User Identification Number
(4-6 digit number can be found on MOU)

Date of Authorization

Name of Project

I hereby declare under penalty of perjury that the foregoing is true and correct.

Executed on _____, _____, 20__ in _____ (city), _____ (state).

Signature of Authorized Officer or Agent

Print ed Name and Title of Authorized Officer or Agent

SUBSCRIBED AND SWORN BEFORE ME
ON THIS ____ DAY OF _____, 20__.

NOTARY PUBLIC

My Commission Expires:

SOLE PROPRIETOR EXEMPTION AFFIDAVIT

The undersigned sole proprietor of _____ verifies that they are exempt from compliance with O.C.G.A. § 36-60-6, stating affirmatively that the individual, firm, or corporation has no employees other than themselves and is not required to register with and/or utilize the federal work authorization program commonly known as E-Verify, or any subsequent replacement program, in accordance with the applicable provisions.

In making this representation under oath, I understand that any person who knowingly and willfully makes a false, fictitious or fraudulent statement or representation in an affidavit shall be guilty of a violation of Code Section 16-10-20 of the Official Code of Georgia.

I hereby declare under penalty of perjury that the foregoing is true and correct.

Executed on _____, _____, 20____ in _____ (City), _____ (state).

Signature of Authorized Officer or Agent

Printed Name and Title of Authorized Officer or Agent

Type of secure and verifiable document provided
(Attach copy i.e. driver's license, passport, etc.)

SUBSCRIBED AND SWORN BEFORE ME
ON THIS _____ DAY OF _____, 20____.

NOTARY PUBLIC

My Commission Expires:

Private Employer Exemption Affidavit Pursuant to O.C.G.A. §36-60-6(d)

By executing this affidavit, the undersigned private employer verifies that it is exempt from compliance with O.C.G.A § 36-60-6. stating affirmatively that the individual, firm or corporation has NO employees that you are the sole proprietor of _____ and are not required to register with and/or utilize the federal work authorization program comm only known as E-Verify, or any subsequent replacement program. in accordance with the applicable provisions and deadlines established in O.C.G.A. § 36-60-6.

I hereby declare under penalty of perjury that the foregoing is true and correct.

Executed on _____, _____, 20__ in _____(city) _____ (state).

Printed Name of Exempt Private Employer

Signature or Exempt Private Employer or
Authorized Officer or Agent

Printed Name and Title of Person Executing Affidavit

SUBSCRIBED AND SWORN BEFORE ME
ON THIS _____ DAY OF 20__.

NOTARY PUBLIC

My Commission Expires:

Secure and Verifiable Documents Under O.C.G.A. § 50-36-2

Issued February 20, 2018, by the Office of the Attorney General, Georgia

The Illegal Immigration Reform and Enforcement Act of 2011 (“IIREA”), as amended by Senate Bill 160, signed into law as Act No. 27, (2013), provides that “[n]or later than August 1, 2011, the Attorney General shall provide and make public on the Department of Law’s website a list of acceptable secure and verifiable documents. The list shall be reviewed and updated annually by the Attorney General.” O.C.G.A. § 50-36-2(g). The Attorney General may modify this list on a more frequent basis, if necessary.

The following list of secure and verifiable documents, published under the authority of O.C.G.A.

§ 50-36-2, contains documents that are verifiable for identification purposes, and documents on this list may not necessarily be indicative of residency or immigration status.

- An unexpired United States passport or passport card [O.C.G.A. § 50-36-2(b)(3); 8 CFR § 274a.2]
An unexpired United States military identification card [O.C.G.A. § 50-36-2(b)(3); 8 CFR § 274a.2]
- An unexpired driver’s license issued by one of the United States, the District of Columbia, the Commonwealth of Puerto Rico, Guam, the Commonwealth of the Northern Marianas Islands, the United States Virgin Island, American Samoa, or the Swain Islands, provided that it contains a photograph of the bearer or lists sufficient identifying information regarding the bearer, such as name, date of birth, gender, height, eye color, and address to enable the identification of the bearer [O.C.G.A. § 50-36-2(b)(3); 8 CFR § 274a.2]¹
- An unexpired identification card issued by one of the United States, the District of Columbia, the Commonwealth of Puerto Rico, Guam, the Commonwealth of the Northern Marianas Islands, the United States Virgin Island, American Samoa, or the Swain Islands, provided that it contains a photograph of the bearer or lists sufficient identifying information regarding the bearer, such as name, date of birth, gender, height, eye color, and address to enable the identification of the bearer [O.C.G.A. § 50-36-2(b)(3); 8 CFR § 274a.2]

¹ For identification presented to poll workers when voting, a registered Georgia voter may present an expired Georgia driver’s license as proof of identification when voting pursuant to O.C.G.A. § 21-2-417.

- An unexpired tribal identification card of a federally recognized Native American tribe, provided that it contains a photograph of the bearer or lists sufficient identifying information regarding the bearer, such as name, date of birth, gender, height, eye color, and address to enable the identification of the bearer. A listing of federally recognized Native American tribes may be accessed at: <https://www.bia.gov/tribal-leaders-directory> [O.C.G.A. § 50-36-2(b)(3); 8 CFR § 274a.2]
- An unexpired United States Permanent Resident Card or Alien Registration Receipt Card [O.C.G.A. § 50-36-2(b)(3); 8 CFR § 274a.2]
- An unexpired Employment Authorization Document that contains a photograph of the bearer [O.C.G.A. § 50-36-2(b)(3); 8 CFR § 274a.2]
- An unexpired passport issued by a foreign government, provided that such passport is accompanied by a United States Department of Homeland Security (“DHS”) Form I-94, DHS Form I-94A, DHS Form I-94W, or other federal form specifying an individual’s lawful immigration status or other proof of lawful presence under federal immigration law” [O.C.G.A. § 50-36-2(b)(3); 8 CFR § 274a.2]
- An unexpired Merchant Mariner Document or Merchant Mariner Credential issued by the United States Coast Guard [O.C.G.A. § 50-36-2(b)(3); 8 CFR § 274a.2]
- An unexpired Free and Secure Trade (FAST) card [O.C.G.A. § 50-36-2(b)(3); 22 CFR § 41.2]
- An unexpired NEXUS card [O.C.G.A. § 50-36-2(b)(3); 22 CFR § 41.2]
- An unexpired Secure Electronic Network for Travelers Rapid Inspection (SENTRI) card [O.C.G.A. § 50-36-2(b)(3); 22 CFR § 41.2]
- An unexpired driver’s license issued by a Canadian government authority [O.C.G.A. § 50-36-2(b)(3); 8 CFR § 274a.2]
- A Certificate of Citizenship issued by the United States Department of Citizenship and Immigration Services (USCIS) (Form N-560 or Form N-561) [O.C.G.A. § 50-36-2(b)(3); 6 CFR § 37.11]

² Senate Bill 160 (Act No. 27), effective July 1, 2013, limited the use of passports issued by foreign nations to satisfy the requirements for submission of secure and verifiable documents to only those passports submitted in conjunction with a United States Department of Homeland Security (“DHS”) Form I-94, DHS Form I-94A, DHS Form I-94W, or other federal form specifying an individual’s lawful immigration status or other proof of lawful presence under federal immigration law.

- A Certificate of Naturalization issued by the United States Department of Citizenship and Immigration Services (USCIS) (Form N-550 or Form N-570) [O.C.G.A. § 50-36-2(b)(3); 6 CFR § 37.11]
- Certification of Report of Birth issued by the United States Department of State (Form DS-1350) [O.C.G.A. § 50-36-2(b)(3); 6 CFR § 37.11]
- Certification of Birth Abroad issued by the United States Department of State (Form FS-545) [O.C.G.A. § 50-36-2(b)(3); 6 CFR § 37.11]
- Consular Report of Birth Abroad issued by the United States Department of State (Form FS-240) [O.C.G.A. § 50-36-2(b)(3); 6 CFR § 37.11]
- An original or certified copy of a birth certificate issued by a State, county, municipal authority, or territory of the United States bearing an official seal [O.C.G.A. § 50-36-2(b)(3); 6 CFR § 37.11]
- When applying for any public benefit with the Department of Driver Services, an applicant may submit either an expired or unexpired document that is listed above as a secure and verifiable document. [O.C.G.A. §§ 50-36-1(g) & 50-36-2(b)(3)]
- When applying for a voter identification card pursuant to O.C.G.A. § 21-2-417.1, an individual may submit the aggregate forms of identification authorized by O.C.G.A. § 21-2-417.1(e).
- In addition to the documents listed herein, if, in administering a public benefit or program, an agency is required by federal law to accept a document or other form of identification for proof of or documentation of identity, that document or other form of identification will be deemed a secure and verifiable document solely for that particular program or administration of that particular public benefit. [O.C.G.A. § 50-36-2(c)]

CERTIFICATION BY CONTRACTOR

Regarding: NON-SEGREGATED FACILITIES

The **Contractor** certifies that he does not, and will not, provide and maintain segregated facilities for his employees at his establishments and, further that he does not, and will not, permit his employees to perform their services at those locations, under his control, where segregated facilities are provided and maintained. Segregated facilities include, but are not necessarily limited to, drinking fountains, transportation, parking, entertainment, recreation, and housing facilities; waiting, rest, wash, dressing, and locker rooms, and time clock, **Work**, storage, restaurant, and other eating areas which are set apart in fact, or by explicit directive, habit, local custom, or otherwise, on the basis of color, creed, national origin, and race. The **Contractor** agrees that, except where he has obtained identical certifications from proposed subcontractor for specific time periods, he will obtain identical certifications from proposed subcontractor prior to the award of subcontracts exceeding \$10,000.00 which are not exempt from the provisions of the Equal Opportunity clause, and that he will retain such certifications in his files.

The **Contractor** agrees that a breach of this certification is a violation of the Equal Opportunity clause in this Contract. The penalty for making false statements is prescribed in 18 U.S.C. 1001.

Contractor (Print)

(Signature)

Name of Signer (Print)

Title of Signer

Date

COMPLETE AND SUBMIT

FORM I

CERTIFICATION BY CONTRACTOR

Regarding: Drug-Free Workplace Act

The Contractor certifies that provisions of Sections 50-24-1 through 50-24-6 of the Official Code of Georgia annotated, relating to the "Drug-Free Workplace Act" have been, and will be, complied with in full, including compliance by subcontractors performing work under this Agreement.

Contractor (Print)

(Signature)

Name of Signer (Print)

Title of Signer

Date

COMPLETE AND SUBMIT

FORM J

NON-COLLUSION AFFIDAVIT OF PRIME CONTRACTOR

State of _____, County of _____

_____, being first duly sworn,
deposes and says that:

1. He/She is _____ (County, Partner, Officer, Representative, or Agent) of the Contractor that has submitted the attached bid;
2. He/She is fully informed respecting the preparation and contents of the attached bid and of all pertinent circumstances respecting such bid;
3. Such bid is genuine and is not a collusive or sham bid;
4. Neither the said Contractor nor any of its officers, partners, agents, representatives, employees, or parties in interest, including this affiant, has in any way colluded, conspired, connived, or agreed, directly or indirectly, with any other Contractor, firm or person to submit a collusive or sham bid in connection with the Contract for which the attached bid has been submitted to or refrain from Proposing in connection with such Contract, or has in any collusion or communication or conference with any other Contractor, firm or person to fix the price or prices in the attached bid or of any other Contractor, or to fix any overhead, profit or cost element of the bid price or the bid price of any other Contractor, or to secure through any collusion, conspiracy, connivance or unlawful agreement any advantage against Peach County or any person interested in the proposed Contract; and,
5. The price or prices bid in the attached bid are fair and proper and are not tainted by any collusion, conspiracy, connivance, or unlawful agreement on the part of the Contractor or any of its agents, representatives, County's employees, or parties in interest, including this affiant.

Signature _____

Name (Print) _____

Title (Print) _____

Subscribed and sworn to before me

This _____ day of _____ 2021.

(SEAL)

Title

CONFLICT OF INTEREST CERTIFICATION

By signing and submitting this Bid I hereby certify that employees of this company or employees of any company supplying material or subcontracting to do Work on this Contract will not engage in business ventures with employees of Peach County or Peach County Consultants nor shall they provide gifts, gratuities, favors, entertainment, loans, or other items of value to employees of Peach County.

Also, by signing and submitting this Contract, I hereby certify that I will notify Peach County through its Director of Public Works of any business ventures entered into between employees of this company or employees of any company supplying material or subcontracting to do Work on this Contract with a family member of Peach County employees.

Contractor

(Signature)

Name of Signer

Title of Signer

Date

INDEMNITY AGREEMENT

This indemnity agreement made and entered into in favor of PEACH COUNTY ("COUNTY"), a municipal corporation, by _____.

WHEREAS _____ has submitted a bid to COUNTY so as to provide _____.

NOW, THEREFORE, as an additional consideration in COUNTY awarding the bid to _____.

_____ agrees to indemnify and hold harmless COUNTY, its agents, principals, officers, and employees, their successors and assigns, individually and collectively, with respect to all claims, demands or liability for any injuries to any person (including death) or damage to any property arising out of any alleged negligence of COUNTY, its officers, agents, or employees in connection with said bid /award; provided this indemnity shall not extend to any damage, injury or loss due to COUNTY's sole negligence or willful misconduct of COUNTY. _____ shall defend against all such claims and pay expenses of such defense, including reasonable attorney fees, and all judgments based thereon.

WITNESS THE HAND AND SEAL of the _____ pursuant to proper corporate authority ____ day of _____, 2021.

[CORPORATE NAME]

By: _____

Title _____

Attest: _____

Title _____

[Affix Corporate Seal]

**TITLE VI CIVIL RIGHTS ACT OF 1964
CONTRACTOR AGREEMENT**

During the performance of this Contract, the Contractor, for itself, its assignees and successors in Interest (hereinafter referred to as the "Contractor"), agrees as follows:

- (1) **Compliance with Regulations:** The Contractor shall comply with the Regulations relative to nondiscrimination in federally assisted programs of the Department of Transportation (hereinafter, "DOT") Title 49, Code of Federal Regulation, Part 21, as they may be amended from time to time (hereinafter referred to as the Regulations), which are herein incorporated by reference and made part of this Contract.
- (2) **Nondiscrimination:** The Contractor, with regard to the work performed by it during the Contract, shall not discriminate on the grounds of race, religion, color, sex, age, national origin, or disability in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The Contractor shall not participate either directly or indirectly in the discrimination prohibited by Section 21.5 or the Regulations, including employment practices when the Contract covers a program set forth in Appendix B of the Regulations.
- (3) **Solicitations for Subcontracts, including procurements of materials and equipment:** In all solicitations either by competitive bidding or negotiation made by the Contractor for work to be performed under a subcontract, including procurements of materials or leases of equipment, each potential subcontractor or supplier shall be notified by the Contractor of the Contractor's obligations under this Contract and the Regulations relative to nondiscrimination on the grounds of race, religion, color, sex, age, national origin, or disability.
- (4) **Information and Reports:** The Contractor shall provide all information and reports required by Regulations or directives issued pursuant thereto, and shall permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the recipient or the FTA to be pertinent to ascertain compliance with such Regulations, orders and instructions. Where any information is required or a Contractor is in the exclusive possession of another who fails or refuses to furnish this information, the Contractor shall so certify to the recipient, or the FTA, as appropriate, and shall set forth what efforts it has made to obtain the information.
- (5) **Sanctions for Noncompliance:** In the event of the Contractor's noncompliance with the nondiscrimination provisions of this Contract, the recipient shall impose such Contract sanctions as it or the FTA may determine to be appropriate, including but not limited to:
 2. Withholding of payments to the Contractor under the Contract until the Contractor complies, and/or
 3. Cancellation, termination or suspension of the Contract, in whole or in part.

**TITLE VI CIVIL RIGHTS ACT OF 1964
CONTRACTOR AGREEMENT (CONTINUED)**

(6) Incorporation of Provisions: The Contractor shall include the provisions of paragraph (1) through (5) of this section in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Regulations, or directives issued pursuant thereto. The Contractor shall take such action with respect to any subcontract or procurement as the recipient or the FTA may direct as a means of enforcing such provisions including sanctions for noncompliance: Provided, however, that, in the event a Contractor becomes involved in, or is threatened with, litigation with a subcontractor or supplier as a result of such direction, the Contractor may request the services of the Attorney General in such litigation to protect the interests of the United States.

DATE: _____

COMPANY NAME: _____

AUTHORIZED REPRESENTATIVE NAME: _____

TITLE: _____

SIGNATURE: _____

COMPLETE AND SUBMIT

FORM O

DEBARRED BIDDERS/INTEGRITY CERTIFICATION

Certification Regarding Debarment, Suspension, Ineligibility, and Voluntary Exclusion (49 CFR, Part 29):

The Contractor must certify that neither it nor its principals are presently debarred, suspended, proposed for disbarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency. Further, the Contractor certifies that he or she shall obtain an identical certification from all its subcontractors. The Contractor also agrees that when a subcontractor is unable to certify to any of the statements in this certification, the prospective participant shall submit an explanation to the Contractor.

DATE: _____

COMPANY NAME: _____

AUTHORIZED REPRESENTATIVE NAME: _____

TITLE: _____

SIGNATURE: _____

DISPUTES DISCLOSURE

Answer the following questions by placing an "X" after "YES" or "NO". If you answer "YES", state the nature of each requests for equitable adjustment, Contract claim or litigation, and include a brief description of the case, the outcome or status or suit and the monetary amount of extended Contract time involved via attachment.

Has your firm or any of its officers, received a reprimand of any nature or been suspended by the Department of Professional Regulation or any other regulatory agency or professional association within the last five- (5) years? YES [] NO []

If yes, please explain:

Has your firm, or any member of your firm, been declared in default, terminated or removed from a Contract or job related to the services your firm provided in the regular course of business within the last five (5) years?

YES [] NO []

If yes, please explain:

Has your firm had filed against it or filed any request for equitable adjustment, Contract claims or litigation in the past five (5) years that is related to the services your firm provides in the regular course of business?

YES [] NO []

If yes, please explain:

I hereby certify that all statements made are true and agree and understand that any misstatement, misrepresentation, or falsification of facts shall be cause for forfeiture of rights for further consideration on this project.

(Firm)

(Date)

AUTHORIZED SIGNATURE

OFFICER/TITLE

PRINTED OR TYPED NAME

STATE OF: _____

COUNTY OF: _____

The foregoing instrument was acknowledged before me this ____ day of _____, 2021.

By _____, of _____ (Corporation), a _____ Corporation, on behalf of the corporation. He/She is personally known to me or has produced _____ as identification.

_____/Notary Public My commission expires: _____

COMPLETE AND SUBMIT

FORM Q

LIST OF SUBCONTRACTORS

The bidder shall list below the name and business address of each subcontractor who will perform work under this Contract in excess of five percent of the Contractor's total bid price and shall also list the portion of the work which will be done by such subcontractor. The listing of more than one subcontractor for each item of work to be performed with the words "and/or" will not be permitted. All information must be provided for each subcontractor. Failure to comply with this requirement shall render the proposal (bid) non-responsive and shall cause its rejection. (Attach additional sheets if required.). All subcontractors listed must complete and submit Form E, Subcontractor E-verify Affidavit with this bid.

Work to be preformed	Subcontractor License Number (If Required)	Percent of Total Contract	Subcontractor's Legal Name, Address, and Phone #

END OF SECTION

ALLOWANCES**PART 1 – GENERAL**

- A. The Contractor shall include in his lump sum bid proposal the allowances stated herein. These allowances shall cover manufactured equipment or services that will be provided to the contractor by others. The contractor shall cause the work covered by these allowances to be provided by such suppliers as the Owner may select. The Contractor's cost for handling, coordinating and any other costs that are necessary to complete these items but not specifically covered in the allowance shall be included in the bid item of the Contractor's choice. The final amount of any allowance item listed herein shall be adjusted accordingly by change order to reflect actual cost.

PART 2 – PRODUCT

- A. Allowances shall be utilized to incorporate cost changes for any additional authorized work into the scope of work up to the amount budgeted above. Contract change orders shall be enforced for contract changes over and above this amount. These Allowances shall authorize the Contractor to perform additions to work, but the Contractor shall perform no work until written authorization has been delivered to the Contractor by the Owner. Contractor should not expect that any Allowances will be issued; Allowances shall be issued at the discretion of the Owner only.

The value of any work covered by a Allowances shall be determined in one of the following ways:

1. Where the work involved is covered by unit prices contained in the Contract Documents, by application of unit prices to the quantities of the item involved (subject to the provisions of General Conditions, Article 77, paragraph 11.03 inclusive).
2. By mutual acceptance of a lump sum by Contractor and the Owner
3. On the basis of the cost of the work plus a Contractor's Fee for overhead and profit. This basis shall be as established for Change Orders in General Conditions, paragraph 12.01.

PART 3 – EXECUTION

- A. Amounts stated shall include all taxes, coordination and handling that may be required to provide the equipment to the owner. Owner may choose to delay the purchase of equipment to the end of the contract.

END OF SECTION

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MEASUREMENT & PAYMENT

PART 1 GENERAL

1.1 SCOPE

- A. Work includes furnishing all labor, equipment, tools and materials, which are not furnished by the Owner and performing all operations required to complete the work satisfactorily, in place, as specified and as indicated on the drawings.
- B. Required items of work and incidentals necessary for the satisfactory completion of the Work which are not specifically listed in the bid, and which are not specified in this section to be measured or to be included in one of the items listed in the bid, shall be considered as incidental to the work. All costs thereof, including Contractor's overhead costs and profit, shall be considered as included in the lump sum or unit prices bid for the various bid items. The Contractor shall prepare the bid accordingly.
- C. At his discretion, the Engineer may request detailed cost justification or proof of materials and services delivered to the site. This includes, but not limited to, invoices from material suppliers, sub-contractors, vendors, etc. Failing to provide requested information may be cause for non-payment.

1.2 DESCRIPTIONS

- A. All estimated quantities for unit price items, stipulated in the Proposal, or other Contract Documents, are approximate and are to be used as a basis for estimating the probable cost of the Work and for comparing the bids submitted for the Project. The actual amounts of work done and materials furnished under unit price items may differ from the estimated quantities. The basis of payment for work and materials will be the actual amount of the work done and material furnished as shown on the Plans. The Contractor agrees to make no claim for damages, anticipated profits or otherwise on account of any difference between the amounts of work actually performed and materials actually furnished and the estimated amounts included in the Proposal. The Contractor will not be paid for any work which exceeds 25 percent of the quantity set forth in the Proposal without a change order issued before the work is performed unless specifically ordered in writing by the Owner. The Contractor will provide assistance to the Owner to check quantities and elevations when so requested.
- B. Final payment quantities shall be determined from the record drawings. The record drawing lengths, dimensions, quantities, etc. shall be determined by a survey after the completion of all required work. Said survey shall conform to Section 01720 of these specifications. The precision of final payment quantities shall match the precision shown for that item in the bid. Preparation, maintenance, and delivery of Project Record Documents are considered incidental to the work.
- C. Payment will be made by extending unit prices multiplied by quantities provided and then summing the extended prices to reflect actual work. Such price and payment shall constitute full compensation to the Contractor for furnishing all permits, labor,

equipment, tools and materials not furnished by the Owner and for performing all operations required to provide to the owner the entire project, complete in place, as specified and as indicated on the drawings.

- D. No separate payment will be made for any item of work, materials, parts, equipment, supplies or related items required to perform and complete the work. The costs for all such items required shall be included in the price bid for item of which it is a part. The Bid Form is provided for the Contractor's convenience and to assign values to the work to be performed. No separate payment shall be made for incidental work required in the contract documents. The total bid amount shall be all inclusive of the work to be performed, in place, complete, and accepted. No separate payment shall be made for any work not specifically listed on the Bid Form but required to perform the work in the bid documents. This work will be considered incidental to the performance of the contract.
- E. "Products" shall mean materials or equipment permanently incorporated into the work. All materials and products used on the site shall be new, shall not be refurbished, and shall be provided specifically for the project.

1.3 CLEARING AND GRUBBING

- A. Payment for clearing and grubbing shall be made at the unit price bid.
- B. The area to be cleared & grubbed for measurement and payment shall as indicated on the drawings by proposed contour lines. Additional clearing and grubbing may be required for site access. No payment will be made for additional clearing and grubbing.
- C. The cost of moving and reestablishing landscape features, including labor and materials, shall be included in the unit price bid for the item to which it pertains. No separate payment will be made for moving, repair, or re-establishment of landscape features.

1.4 EROSION AND SEDIMENTATION CONTROL

- A. General
 - 1. The Contractor shall comply with all appropriate provisions of the State of Georgia General Permit for NPDES Storm Water Discharges Associated with Construction Activities (Storm Water Permit), and the approved Plan.
 - 2. No separate payment shall be made for temporary and/or permanent erosion and sedimentation controls, except as noted below. All other temporary and/or permanent erosion and sedimentation control costs, including the cost of obtaining land disturbance permits or other requirements of the Storm Water Permit, shall be included in the unit price bid for the item to which it pertains.
 - 3. No payment will be made for any portion of the project for which temporary erosion and sedimentation controls are not properly maintained.
 - 4. Quantities for payment shall be based upon actual quantity constructed and authorized by the Engineer.

- B. Construction Exits: All costs for construction exits per each, including installation, maintenance, repair, and removal, shall be included in the unit price bid for construction exits.
- C. Silt Fence/Sediment Barriers: All costs for sediment barriers, specifically silt fences, including installation, maintenance, repair, replacement, and removal, shall be included in the unit price bid for sediment barriers. Retainage will not be paid until all silt fence has been removed at the conclusion of the project.
- D. Final Grassing and mulching: Grassing will be measured to the nearest 10th of an acre. Grassing shall include all labor, materials, installation, and maintenance required for a stand of permanent grass.
- E. Rip Rap
 - 1. The costs of all rip rap, including filter fabric, shown in the drawings, specified, or directed by the Engineer, shall be included in the unit price bid for rip rap.
 - 2. When crossing a stream or ditch, the quantity eligible for payment shall be limited to 10 feet upstream and 10 feet downstream from top of trench excavation and from five feet from top of bank, across a creek or ditch, banks and bottoms, to five feet beyond top of opposite bank. Any other areas at creeks or ditches disturbed by the Contractor, which require rip rap, shall be rip rapped at no additional cost to the Owner.

1.5 EXCAVATION AND BACKFILL

- A. No separate or additional payment will be made for any special or unique method, means, techniques or equipment necessary for the Contractor's compliance with these Specifications, regulatory requirements, permits, laws or regulations which govern this project.
- B. Sheet piling, Bracing and Shoring: No separate payment will be made for providing sheet piling, bracing and shoring.
- C. Dewatering Excavations: All costs of equipment, labor and materials required for dewatering shall be included in the price bid for the item to which it pertains. No additional payments will be made for dewatering, including well-point systems.
- D. Bedding
 - 1. The unit price bid for headwall construction shall include excavation of the foundations to the depth below the structure necessary to provide specified bedding.
 - 2. No separate payment will be made for labor and material used to provide specified bedding. The cost of all bedding materials shall be included in the unit price bid for the item to which it relates.

3. No additional payment will be made for improved bedding required to compensate for over-excavation of the foundation.

E. Initial Backfill

1. No separate payment shall be made for initial backfill.
2. No separate payment shall be made for drying out the initial backfill material in order the meet the compaction requirements.
3. No separate payment shall be made for the adding of moisture to the initial backfill materials in order to meet the compaction requirements.
4. Payment for providing select material for backfilling will be made only if ordered by the Engineer. Select backfill will be ordered by the Engineer only if the in-situ material does not meet the requirements for initial backfill for reasons other than moisture content, i.e., the backfill material contains rock larger than that specified, organics, cinders, stumps, limbs, frozen earth or mud, man-made wastes or other unsuitable materials. No payment will be made for select backfill acquired from the project site. Payment will be made only for select backfill which is imported to the project site.

F. Final Backfilling

1. No additional payment will be made for additional material when excavated materials are used.
2. No separate payment shall be made for drying out the final backfill material in order to meet the compaction requirements.
3. No separate payment shall be made for the adding of moisture to the final backfill materials in order to meet the compaction requirements.
4. Payment for providing select material for backfilling will be made only if ordered by the Engineer. Select backfill will be ordered by the Engineer only if the in-situ material does not meet the requirements for final backfill for reasons other than moisture content, i.e., the backfill material contains rock larger than specified, organics, cinders, stumps, limbs, frozen earth or mud, man-made wastes or other unsuitable materials. No payment will be made for select backfill acquired from the project site. Payment will be made only for select backfill which is imported to the project site.

1.6 TRAFFIC CONTROL

- A. Payment for traffic control and temporary measures for maintaining traffic shall be made at the lump sum price bid and shall include all labor, materials, and equipment necessary to adhere to the latest MUTCD standards published by the Federal Highway Administration during construction.

MUTCD – Manual on Uniform Traffic Control Devices for Streets and Highways, latest edition.

1.7 SITEWORK

A. Existing Utilities and Obstructions

Horizontal and vertical conflicts: No payment will be made for any delay or extra cost encountered by the Contractor due to protection, avoidance or relocation of existing utilities, mains or services.

B. Location and Grade

1. No separate payment shall be made for survey work performed by or for the Contractor in the establishment of reference points, benchmarks, cut sheets, limits of right-of-way or easement, including their restoration, as well as centerline or baseline points.
2. The Owner or representative may, at Owner's cost, hire a surveyor to verify Contractor's reference points, centerlines and work performed. This in no way relieves the Contractor of the responsibility of installing reference points, centerlines, temporary benchmarks or verifying that the work has been performed accurately.

C. Clean Up

1. Clean-up: Payment for clean-up and testing shall be included in the unit price shown for clearing and grubbing. Any other cost for labor, materials and equipment required for clean-up shall be included in the unit price bid for the item to which it pertains.

D. Testing

1. Testing: The Contractor shall be responsible for soils and material testing. Testing shall be included in the unit price bid for the item to which it pertains.

END OF SECTION

SECTION 01571

GENERAL NPDES PERMIT FOR STORM WATER
DISCHARGES FROM CONSTRUCTION ACTIVITIES

PART 1 GENERAL

1.01 SCOPE

- A. If more than 0.99 acres will be disturbed, Contractor shall assume the responsibilities and requirements of the Primary Permittee for compliance to the State of Georgia Environmental Protection Division General Permit No. GAR 100002 and the Comprehensive Monitoring Plan once awarded the contract.
- B. Temporary facilities and controls shall comply with laws, codes, and regulations of the place where the Project is located.
- C. All sediment and erosion controls shall be implemented as shown on the plans and as necessary for construction activities to comply with the Clean Water Act and General Permit No. GAR100002.
- D. Certified personnel shall be provided by the Contractor to provide installation, maintenance, inspections, sampling, reporting, and recordkeeping to conform to General Permit No. GAR 100002.

PART 2 - PRODUCTS

- A. Contractor shall provide all materials, labor, equipment, etc. necessary to provide for conform to the requirements of GAR 100002. Rain gauges and sampling equipment must be approved by the Engineer and capable of recording data and sampling according to the standards and frequencies required.

PART 3 - EXECUTION

- A. Notice of Intent (NOI):

If the contractor intends to disturb greater than 0.99 acres, the Contractor shall prepare and submit an NOI after being awarded the contract.

- B. Inspection:

The Contractor shall provide and bear all costs for an inspector who is certified in the sediment and erosion control measures and best management practices, the inspector shall be responsible for the installation, documentation, record keeping and maintenance of all facilities, relating to stormwater management and sediment and erosion control measures.

- C. Record on-site rainfall data, as required.

General NPDES Permit for Storm Water Discharges from Construction Activities

- D. If required, monitor storm water discharges for turbidity differential. Samples shall be collected and analyzed by a certified laboratory approved by the Owner.
- E. Maintain comprehensive monitoring program:
 - a. This is construction for infrastructure that shall have simultaneous monitoring sites throughout the construction period. Monitoring sites shall remain in place until construction is completed and all disturbed areas have been stabilized and runoff from a ½” rainfall event has been collected and analyzed.
 - b. Maintain records on-site:
Rainfall, inspections, plans, maintenance activities, copies of analysis and other information as required in the Comprehensive monitoring plan.
 - c. Submit summary monthly monitoring reports to EPD, Engineer, and Owner.
- F. All deficiencies and corrective actions shall be logged in daily reports. Failure to implement measures necessary to comply with the permit and the “Clean Water Act” shall constitute grounds for work stoppage until deficiencies are corrected by the Contractor at no cost to the Owner.
- G. Refer to construction drawing for additional information.
- H. If an NOI is filed, the Contractor, upon approval of the Owner, shall submit a Notice of Termination (NOT) and any necessary supporting documentation to EPD when the site has undergone final stabilization and all storm water discharges associated with construction have ceased.

END OF SECTION

PROJECT RECORD DOCUMENTS

PART 1 GENERAL

1.01 SCOPE

- A. The Work under this Section includes, but is not necessarily limited to, the compiling, maintaining, recording and submitting of project record documents as herein specified.
- B. Record documents include, but are not limited to:
 - 1. Drawings;
 - 2. Specifications;
 - 3. Change Orders and other modifications to the Contract;
 - 4. Engineer Field Orders or written instructions, including Requests for Information (RFI) and Clarification Memorandums;
 - 5. Reviewed Shop Drawings, product data and samples;
 - 6. Test records.
- C. The Contractor shall maintain on the Project Site throughout the Contract Time an up to date set of Record Drawings.

1.02 MAINTENANCE OF DOCUMENTS AND SAMPLES

- A. Storage
 - 1. Store documents and samples in the Contractor's field office, apart from documents used for construction.
 - 2. Provide files and racks for storage of documents.
 - 3. Provide locked cabinet or secure storage space for storage of samples.
- B. File documents and samples in accordance with format of these Specifications.
- C. Maintenance
 - 1. Maintain documents in a clean, dry, legible condition and in good order.
 - 2. Do not use Record Documents for construction purposes.
 - 3. Maintain at the site for the Owner one copy of all Record Documents.

- D. Make documents and samples available at all times for inspection by Engineer.
- E. Failure to maintain the Record Documents in a satisfactory manner may be cause for withholding of a certificate for payment.

1.03 QUALITY ASSURANCE

- A. Unless noted otherwise, Record Drawings shall provide dimensions, distances and coordinates to the nearest 0.1 foot.
- B. Unless noted otherwise, Record Drawings shall provide elevations to the nearest 0.01 foot for all pertinent items constructed by the Contractor.
- C. The Contractor shall employ a currently registered surveyor to prepare the Record Drawings from a post-construction, field run survey. The Record Drawings shall provide elevations to the nearest 0.01 foot for all pipe inverts, guardrails, and other pertinent items constructed by the Contractor. The Record Drawings shall provide dimensions, distances, and coordinates to the nearest 0.01 foot and horizontal angles to the nearest 10 seconds.

1.04 RECORDING

- A. Label each document “PROJECT RECORD” in neat, large, printed letters.
- B. Recording
 - 1. Record information concurrently with construction progress.
 - 2. Do not conceal any Work until required information is recorded.

1.05 RECORD DRAWINGS

- A. Contractor shall provide two sets of neat, clean, legible Redline Drawings to the Owner.
- B. Legibly mark and revise drawings to record actual construction, including:
 - 1. All Construction
 - a. Changes of dimension and detail.
 - b. Changes made by Requests for Information (RFI), Field Order clarification memorandums or by change order.
 - c. Details not on original Drawings.
 - d. Two sets of approved shop drawings.
 - 2. Site Improvements, Including Underground Utilities
 - a. Horizontal and vertical locations of all exposed and underground utilities and appurtenances, both new facilities constructed, and those utilities encountered, referenced to permanent surface improvements.

- b. Location of and dimensions of roadways and driveways.
- c. The locations shall be referenced to at least two easily identifiable, permanent landmarks (e.g., power poles, valve markers, etc.) or benchmarks.
- d. All improvements shall be located and tied into the state plane coordinates.

3. Structures

- a. Depths of various elements of foundation in relation to finish first floor datum or top of wall.
- b. Location of internal and buried utilities and appurtenances concealed in the construction, referenced to visible and accessible features of the structure.

1.06 SPECIFICATIONS

A. Legibly mark each section to record:

- 1. Manufacturer, trade name, catalog number, and supplier of each product and item of equipment actually installed.
- 2. Changes made by Requests for Information (RFI), Field Order, Clarification Memorandums, or by Change Order.

1.07 SUBMITTAL

A. At contract closeout, deliver Record Documents to the Owner.

B. Accompany submittal with transmittal letter, in duplicate, containing:

- 1. Date
- 2. Project title and number
- 3. Contractor's name and address
- 4. Title and number of each Record Document
- 5. Signature of Contractor or Contractor's authorized representative

END OF SECTION

SECTION 31 11 00 – CLEARING & GRUBBING

PART 1 – GENERAL

1.1 SCOPE OF WORK

- A. Provide labor, material and equipment necessary to remove existing trees, vegetation, or debris located within building lines, paving areas, rights-of-way, spoil areas, and defined Limits of Work, except for those selected and so marked to be retained by the Design Professional prior to the start of the grading work.
- B. All timber of marketable value shall be salvaged.

1.2 EXISTING CONDITIONS

- A. Site conditions are shown based on available information. Visit the site, familiarize yourself with conditions, and verify conditions in the field. Notify the Design Professional / Design Professional of any discrepancy between plan and field conditions or assume full responsibility for condition encountered.

1.3 PROTECTION

- A. Bench Marks: Maintain bench marks, monuments, and other reference points. If disturbed or destroyed, replace as directed by the Design Professional.
- B. Iron Pins and Concrete Monuments: During staking, verify iron pins and concrete monuments within 50' of any clearing or grading operation as property limits and drive #6 Bar 4'-0" long, 1'-6" into the ground at pin points, and paint pin and bar a bright yellow.
- C. Disposition of Utilities:
 - 1. Follow rules and regulations of Peach County for the respective utilities in execution of work under this section.
 - 2. Active Utilities Shown on Drawings: Protect from damage and remove or relocate only as indicated or specified. Take special precautions not to damage utility lines or manholes. Correct any damage to utilities or structures original status at no additional cost to the Design Professional.
 - 3. Active Utilities Not Shown on Drawings: When any functioning underground utilities are Uncovered during the work, promptly notify the Design Professional in writing. The Construction Professional is liable for any damage to underground or overhead utility lines. Repair and restore services at no additional cost to the Design Professional. Protect or relocate in accordance with written instruction of the Design Professional and adjust Contract Sum for additional work in accordance with other divisions.
 - 4. Inactive and Abandoned Utilities: Remove, plug, or cap in absence of specific requirements. Plug or cap utility lines at least five feet outside of new building walls or as required by local regulations.
- E. Properties: Protect adjacent properties, including but not limited to fences, mains, manholes, catch basins, valve boxes, poles, guys and other appurtenances; repair damage to any property due to work under this contract.

1.4 DEFINED LIMITS OF WORK

- A. For use in these Specifications, the Limit of Work is defined as the minimum degree of clearing necessary to construct the improvements. Extend clearing for roadways to the outside shoulders of the road. Clear for utilities no wider than 20 feet. Where graded slopes are necessary to tie to existing grades, limit clearing to the top or 10' beyond toe of slope. Do not extend the Limits of Work onto adjoining property except as indicated by appropriate easement nor into designated non-disturbed buffer and tree save areas.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Engineering Equipment: Use surveyor's transit and measuring devices properly calibrated to accurately lay out the work.
- B. Other Layout Equipment: Provide stakes and batter boards of size and quality commensurate with function. Use wire and non-stretching cord to establish reference lines for site clearing and grading.
- C. Protection Materials: To protect trees and other existing work use treated wood or exterior plywood of size, strength, and extent to provide protection of work remaining.

PART 3 - EXECUTION

3.1 STAKING

- A. Layout: Before the work is started, stake out center lines of work, flag the limits of clearing, and use established bench marks shown on the referenced plan. After the Design Professional has examine and approved this work, complete the clearing.

3.2 CLEARING AND GRUBBING

- A. Operation: Cut, remove and dispose of trees, brush, rock, rubbish, debris, and other objectionable material resting on, protruding above ground, or 18" below subgrade within the limits of grading, as shown on the drawings.
- B. Disposition: Remove and dispose of off the site, individual trees, shrubs and stumps, along with other rubbish materials cleanly and completely in approved manners so as not to injure trees to remain. Comply with local ordinances and obtain the necessary permits for disposing of trees, stumps, and other debris.
- C. Burning: Burning will not be allowed.
- D. Tree Save Areas: In general, do not remove existing trees, whether shown on the drawings or not, that are not in any way of the work or any future installation. Before proceeding with actual clearing operations, identify by an appropriate and clearly recognizable marker trees specifically

intended to be preserved. Notify the Design Professional in writing when trees to remain have been marked; do not remove any trees until the Design Professional has approved proposed tree protection and planned removal.

- E. Coordination: Complete clearing of the site before topsoil stripping operations are begun. Do not leave loose sticks, roots, branches, or any other debris on the site. Avoid mixture of foreign matter with the topsoil.

3.3 PROTECTION OF EXISTING TREES

- A. Damage to trees located within designated tree save areas is cause for monetary penalty.
- B. Throughout construction, properly protect existing trees which are to remain or which overhang the property line.
- C. Fence existing trees to remain with 4' x 1 ½" x 3" orange mesh barrier fence or 4 x 4 posts and double 2 x 4 rails at the tree drip line, or as required by local jurisdiction.
- D. Do not cut low hanging branches on trees to be saved, unless approved by the Design Professional. Use a tree surgeon to cut branches which must be cut to eliminate obstructions. Immediately and properly trim any cuts, or accidental injuries to the bark or trunk, and properly trim and paint with a protective tree wound and sealing compound.
- E. Warp up or down between existing grades of root areas and new finished grades surrounding trees to remain. Where fill under 2' occurs, fill with broken stone or washed gravel to full fill depth for a distance of 3' from the trunk in directions, the remaining fill being of light, friable topsoil. Leave any trees in the graded area that are at grade level or where the fill is not over two feet (2'-0") at the option of the Design Professional.
- F. Permit no stripping of topsoil, cutting or filling, burning of trash, dumping of materials, storage of materials or equipment of any kind, or use by personnel for any activities, whether on or off duty, within the spread of branches of trees to remain.

END OF SECTION 31 11 00

SECTION 31 12 16 – ASPHALT PAVING

PART 1 – GENERAL

1.1 SCOPE OF WORK

- A. Provide labor, material and equipment for construction of asphalt concrete paving surfaces and pavement markings.
- B. The work includes providing paving subbase, base, and final subgrade preparation and fine grading normally incidental to paving operations.

1.2 QUALITY ASSURANCE

- A. Use a soils testing laboratory retained by the Design Professional, to perform pavement tests. Correct any deficiencies in material makeup, strength, or quantities revealed by testing.
- B. Conform to the requirements of the Georgia D.O.T., "Standard Specifications Construction of Transportation Systems, dated April 18, 2013," Where particular sections of the reference specifications are called out, comply with sections of the specification related to the work.
- C. Work performed on the Georgia Department of Transportation (D.O.T.) rights-of-way must be approved and accepted by the Georgia D.O.T. prior to final payment for the work.
- D. Visual Inspection: Conduce a visual inspection. The opinion of the Design Professional is final. Raveling, loose aggregate, insufficient liquid asphalt coverage, unsightly and rough seams, poor craftsmanship, and indications of poor quality control on the part of the Construction Specialist are causes for rejection of the work and remedial action.

PART 2 - PRODUCTS

2.1 MATERIAL

- A. Paving Base Course: Crushed stone base, primed as specified in Georgia D.O.T. Section 310, unless otherwise specified on the plans.
- B. Use materials for hot mix asphalt concrete construction as specified in Georgia D.O.T. Section 400.
- C. Use paving subbase of select soils from stockpiles and site grading operations.
- D. Thermoplastic traffic stripe: Georgia DOT Section 653.
- E. Use materials for shoulder paving that conform to those used in existing shoulders approved by Georgia D.O.T.

PART 3 - EXECUTION

3.1 SUBGRADE PREPARATION

- A. After the subgrade has been thoroughly compacted, proofroll the entire subgrade area. Proofroll as specified in the Section EARTHWORK of these specifications. Remove and satisfactorily repair defective areas which pump, or shove, or are found to be soft and test roll again as specified. In defective areas, plow, harrow and mix to a depth of 6 inches minimum the entire defective subgrade as required to achieve compaction. If stabilization stone is required, mix into the subgrade at 150 LB. /SQ. YD. minimum. After the material has been thoroughly mixed, bring to line and grade the subgrade and compact to the densities for paving area fill contained in the Section EARTHWORK. Blade the surface of the finished subgrade to a smooth and uniform texture.
- B. The cost of stabilization stone is additional to the Contract except where defective conditions arise due to the Construction Specialist's methods or earthwork is unclassified.
- C. Protect the subgrade from damage and maintain it in a smooth, compact, and rut-free condition until the base course has been placed.

3.2 PAVING SUBBASE COURSE

- A. Construct paving subbase course of select surface soils previously stripped and stockpiled. Place paving subbase on prepared subgrade. Thoroughly mix and blend subbase and remove materials that will interfere with fine grading. Compact subbase for its full depth to the minimum standard proctor densities shown on the plans and specified in the Section EARTHWORK. Conform to the established elevations with an acceptable tolerance of one-half inch above or below. Free-drain paving areas without local depressions.

3.3 PAVING BASE COURSE

- A. Construct paving base course of crushed stone or other materials as shown on the drawings and in accordance with Sections 310.01, 310.02, 310.03, and 310.04 of the Reference Specifications. Determine maximum dry density by ASTM D1557. Compaction 100%.

3.4 BITUMINOUS PAVING

- A. Use bituminous paving, hot mix asphaltic concrete construction conforming to Sections 400.01, 400.02, 400.03, 400.04, and 400.05, of the Reference Specifications, modified as follows:
- B. When requested by the Design Professional, submit the job mix formula to the Design Professional for his approval. Approval does not relieve the Construction Specialist of the responsibility for adequacy and warranty of the paving.

3.5 BITUMINOUS PRIME

- A. Use bituminous prime conforming to Sections 412.01, 412.02, 412.03, and 412.04 of the Reference Specifications.

1.1.1 BITUMINOUS TACK COAT

- A. Use bituminous tack coat conforming to Sections 413.01, 413.02, 413.03, and 413.04 of the Reference Specifications. Apply between asphaltic concrete layers and as otherwise directed by the Design Professional.

3.7 PAVEMENT MARKINGS

- A. Apply pavement markings as detailed on the plan sheets, if applicable. Apply paint and markings in accordance with manufacturer's instructions regarding air temperature, wind, mixing, and transport. Protect new work till cured. Remove over spray, spills, and deformities.
- B. Install thermoplastic traffic striping per Georgia DOT Section 653.03.

3.8 TESTING THICKNESS

- A. The Design Professional, at his option and at his expense, may take as many tests as necessary to determine the average thickness of the base course prior to the placing of the surface course. Calculate the average thickness of specimens. Meet the specified thickness of the base course minimum with the average. In areas where there is a deficiency in the thickness of the course, increase in thickness the surface course to the amount of the average deficiency of the tests. The surface course may also be tested. If tests show a deficiency of 1/4" or more in the surface course, place additional surface course up to one inch in thickness at no cost to the Design Professional and pay for the failing test.

3.9 VISUAL INSPECTION

- A. Do not mix and place asphaltic concrete if the existing surface is wet or frozen. Do not lay asphaltic concrete at air temperatures below 55° F (13° C).

3.10 VISUAL INSPECTION

- A. The Design Professional may conduct a visual inspection of the finish work and surface course appearances.
- B. The Design Professional will annotate areas of rough, gravelly, or raveling asphalt, poor quality, rough or uneven seams, gouging, evidence of cold application, and other defects.
- C. The Construction Specialist and Design Professional will agree upon the required remedial actions needed to address the deficiencies.
- D. Perform remedial work in a timely manner prior to final acceptance.

3.11 CLEAN-UP

- A. At the completion of the work, clean up scraps, rubbish and surplus materials caused by the work and haul them away from the site. Remove asphaltic materials from adjacent surfaces and leave in neat, clean and orderly condition. Hose and wash down asphalt and related concrete paving to remove mud, debris and other extraneous materials, just prior to final inspection.

END OF SECTION 311216

SECTION 31 16 20 – CONCRETE CURBS, GUTTERS, AND WALKS

PART 1 - GENERAL

1.1 SCOPE OF WORK

- A. Provide labor, material and equipment required to complete curb and gutter, sidewalks, and other miscellaneous site improvements, including preparation of subgrade for areas and backfilling and shaping of finished grade.

1.2 QUALITY ASSURANCE

- A. Submit design mixes when requested for each type of concrete. Use an independent testing facility acceptable to the Design Professional for preparing and reporting proposed mix designs.
- B. Provide drawings, schedules and details for the fabrication of the reinforced steel. Complete drawings and details so that when used with the contract drawings, the reinforcing steel can be placed.
- C. Store materials and equipment only in designated areas.
- D. Do not begin concrete operations until underground work of other trades has been completed.
- E. Verify grades and elevations before proceeding with the work. While grades and elevations will, in general, conform to those shown on drawings, the Design Professional reserves the right to make minor modifications by reasonable field adjustments prior to completion of subgrade work.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Concrete:
 - 1. Use 3,000 psi concrete, 4" maximum slump unless otherwise shown on drawings, for aprons, curbs and gutters, and walks and steps.
- B. Filler and Sealer for Expansion Joints: preformed strips of cellular fiber impregnated with suitable bituminous binder. Filler to conform to section area and extend through section to within one-half inch (1/2") of top surface and to meet Federal Specifications HH-F-341(A) Type I.
- C. Reinforced Bars: ASTM A615-04 with Supplement S1, Grade 60.
- D. Formwork: Square-edged, finished one side lumber, plywood, metal or other material acceptable to the Design Professional. Comply with ACI Standard Recommended Practice for Concrete Formwork.
- E. Curing compounds: Meeting ASTM C309-03, Type 1.

PART 3 - EXECUTION

3.1 GENERAL

- A. Provide formed concrete as detailed on the plans. Accurately form cast-in-place concrete to a true, clean, straight, even profile.
- B. Form curb and gutter to line grades indicated. Lay out radii with curved formwork. Place walk expansion joints at 50'-0" maximum and contraction joints at every 10'-0" on center. Provide expansion joints at curve intersections.
- C. Place concrete walks, aprons and pavement to the grades and dimensions shown on the drawings. Place walk expansion joints at a maximum 50'-0" spacing. Space contraction joints at dimensions equal to the walk width. Slope surfaces a minimum 1/8" per foot to prevent puddling or ponding of water.
- D. Form cast-in-place retaining walls to the details shown on the drawings, able to hold the weight of wet concrete without deflection.

3.2 CONCRETE MIXING

- A. Ready-mix Concrete: Comply with the requirements of ASTM C94-03.
- B. During hot weather or under conditions contributing to rapid setting of concrete, a shorter mixing time than specified in ASTM C94-03 may be required.
- C. When the air temperature is between 85F and 90F, reduce the mixing and delivery time from 1 ½ hours to 75 minutes, and when the air temperature is above 90F, reduce the mixing and delivery time to 60 minutes.

3.3 PLACING OF CONCRETE

- A. Do not place concrete until embedded items and reinforcement have been placed in forms and the approval of the Geotechnical Engineer has been obtained. Give ample notice to the Geotechnical Engineer of an impending pour so that he may inspect work prior to placing.
- B. Convey concrete from mixer to place of final deposit by methods that will prevent segregation or loss of material.
- C. Deposit concrete as nearly as practicable to its final position. Carry on pouring at a rate that concrete is plastic and flows readily into spaces between reinforcement. Once started, continue placing as a continuous operation until placement of the section is completed.
- D. Work concrete into forms, around bars and embedded items with spades, rods, trowels and vibration, so as to procure a solid homogeneous mass, free of pockets, voids and honeycombs.
- E. Use construction joints made and located so as to least impair the strength of the structure. Where a joint is made, clean surface of the concrete and remove laitance. Mechanically roughen

vertical joints, wet and slush with a coat of neat cement grout immediately before placement of new concrete.

- F. When hot weather conditions exist that would seriously impair the quality and strength of concrete, place concrete in compliance with ACI 305-99. Cool ingredients before mixing to maintain concrete temperature at time of placement below 90F. Mixing water or used chopped ice to control the concrete temperature provided. Calculate the water equivalent of the ice into the total amount of mixing water. Cover reinforcing steel with water-soaked burlap if it becomes too hot, so that the steel temperature will not exceed the ambient air temperature immediately before embedment in concrete. Do not use retarding admixtures without the written approval of the Design Professional.

3.4 FINISHING OF CONCRETE

- A. Broom finish surfaces of aprons, curb and gutters, and drainage flumes in accordance with ACI 303-97.
- B. Smooth rub finish exposed surfaces of cast-in-place retaining walls in accordance with ACI 301-99.

3.5 CURING OF CONCRETE

- A. Spray surfaces with a curing compound as soon as forms are removed and finishing is completed.

3.6 TESTING OF CONCRETE

- A. Reference Section 33 00 00 for testing requirements.

3.7 REPLACING DAMAGED CONCRETE

- A. Do not spot patch concrete walks, curb and gutters, and site improvements damaged during construction. If a portion of a panel or section is damaged between tooled or expansion joints, replace the entire section, at no cost to the Design Professional.

END OF SECTION 31 16 20

SECTION 31 17 23 – PAINTED PAVEMENT MARKINGS

PART 1-GENERAL

1.1 SECTION INCLUDES

- A. Parking lot markings, including parking bays, crosswalks, arrows, handicapped symbols, and curb markings.
- B. Roadway lane markings and crosswalk markings.
- C. "No Parking" curb painting.

1.2 RELATED REQUIREMENTS

- A. Section 32 1216 - Asphalt Paving.
- B. Section 32 1313 - Concrete Paving.

1.3 REFERENCE STANDARDS

- A. FS TT-B-1325 - Beads (Glass Spheres); Retro-Reflective; Rev. D, 2007.
- B. FS TT-P-1952 - Paint, Traffic Black, and Airfield Marking, Waterborne; Rev. E, 2007.
- C. MPI (APL) - Master Painters Institute Approved Products List; Master Painters and Decorators Association; current edition, www.paintinfo.com.
- D. FHWA MUTCD - Manual on Uniform Traffic Control Devices for Streets and Highways; U.S. Department of Transportation, Federal Highway Administration; <http://mutcd.fhwa.dot.gov>; current edition.

1.4 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Manufacturer's data sheets on each product to be used, including:
 - 1. Preparation instructions and recommendations.
 - 2. Storage and handling requirements and recommendations.
 - 3. Installation methods.
- C. Certificates: Submit for each batch of paint and glass beads stating compliance with specified requirements.
- D. Maintenance Materials: Furnish the following for Government/COTR's use in maintenance of project.
 - 1. See Section 01 6000 - Product Requirements, for additional provisions.
 - 2. Extra Paint: 2 containers, 1 gallon size of each type and color.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Deliver paint in containers of at least 5 gallons accompanied by batch certificate.
- B. Deliver glass beads in containers suitable for handling and strong enough to prevent loss during shipment accompanied by batch certificate.
- A. Store products in manufacturer's unopened packaging until ready for installation.
- D. Store and dispose of solvent-based materials, and materials used with solvent-based materials, in accordance with requirements of local The City of Blue Ridge.

1.6 FIELD CONDITIONS

- A. Do not install products under environmental conditions outside manufacturer's absolute limits.

PART 2 PRODUCTS

2.1 MATERIALS

- A. Line and Zone Marking Paint: High build per current GDOT specifications.
 - 1. Roadway Markings: Yellow centerline, white edges.
 - 2. Parking Lots: Yellow.
 - 3. Handicapped Symbols: Blue.
- B. Paint For Obliterating Existing Markings: FS TT-P-1952; black for bituminous pavements, gray for Portland cement pavements.
- C. Reflective Glass Beads: FS TT-B-1325, Type I (low index of refraction), Gradation A (coarse, drop-on); with silicone or other suitable waterproofing coating to ensure free flow.
- D. Temporary Marking Tape: Preformed, reflective, pressure sensitive adhesive tape in color(s) required; Sub-Contractor(s) is responsible for selection of material of sufficient durability as to perform satisfactorily during period for which its use is required.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Do not begin installation until substrates have been properly prepared.
- B. If substrate preparation is the responsibility of another installer, notify D/B Contractor Design Representative of unsatisfactory preparation before proceeding.

3.2 PREPARATION

- A. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
- B. Clean surfaces thoroughly prior to installation.
 - 1. Remove dust, dirt, and other granular surface deposits by sweeping, blowing with compressed air, rinsing with water, or a combination of these methods.
 - 2. Completely remove rubber deposits, existing paint markings, and other coatings adhering to the pavement, by scraping, wire brushing, sandblasting, mechanical abrasion, or approved chemicals.
 - 3. Sandblasting: Use equipment of size and capacity necessary, providing not less than 150 cfm of air at pressure not less than 90 psi at each nozzle used.
- C. Where oil or grease are present, scrub affected areas with several applications of trisodium phosphate solution or other approved detergent or degreaser, and rinse thoroughly after each application; after cleaning, seal oil-soaked areas with cut shellac to prevent bleeding through the new paint.
- D. Establish survey control points to determine locations and dimensions of markings; provide templates to control paint application by type and color at necessary intervals.
- E. Temporary Pavement Markings: When required or directed by D/B Contractor Design Representative, apply temporary markings of the color(s), width(s) and length(s) as indicated or directed.
 - 1. After temporary marking has served its purpose, remove temporary marking by carefully controlled sandblasting, approved grinding equipment, or other approved method so that surface to which the marking was applied will not be damaged.
 - 2. At Sub-Contractor(s)'s option, temporary marking tape may used in lieu of temporary painted marking; remove unsatisfactory tape and replace with painted markings at no additional cost to Government/COTR.

3.3 INSTALLATION

- A. Begin pavement marking as soon as practicable after surface has been cleaned and dried.
- B. Do not apply paint if temperature of surface to be painted or the atmosphere is less than 50 degrees F or more than 95 degrees F.
- C. Apply in accordance with manufacturer's instructions using an experienced technician that is thoroughly familiar with equipment, materials, and marking layouts.
- D. Comply with FHWA MUTCD manual (<http://mutcd.fhwa.dot.gov>) for details not shown.
- E. Apply markings in locations determined by measurement from survey control points; preserve control points until after markings have been accepted.
- F. Apply uniformly painted markings of color(s), lengths, and widths as indicated on the drawings true, sharp edges and ends.
 - 1. Apply paint in one coat only.

2. Wet Film Thickness: 0.015 inch, minimum.
 3. Width Tolerance: Plus or minus 1/8 inch.
- G. Roadway Traffic Lanes: Use suitable mobile mechanical equipment that provides constant agitation of paint and travels at controlled speeds.
1. Conduct operations in such a manner that necessary traffic can move without hindrance.
 2. Place warning signs at the beginning of the wet line, and at points well in advance of the marking equipment for alerting approaching traffic from both directions. Place small flags or other similarly effective small objects near freshly applied markings at frequent intervals to reduce crossing by traffic.
 3. If paint does not dry within expected time, discontinue paint operations until cause of slow drying is determined and corrected.
 4. Skip Markings: Synchronize one or more paint "guns" to automatically begin and cut off paint flow; make length of intervals as indicated.
 5. Use hand application by pneumatic spray for application of paint in areas where a mobile paint applicator cannot be used.
 6. Distribute glass beads uniformly on the paint lines within ten seconds without any waste, applied at rate of 6 pounds per gallon of paint; if the marking equipment does not have a glass bead dispenser, use a separate piece of equipment adjusted and synchronized with the paint applicator; remove and replace markings having faulty distribution of beads.
- H. Parking Lots: Apply parking space lines, entrance and exit arrows, painted curbs, and other markings indicated on drawings.
1. Mark the International Handicapped Symbol at indicated parking spaces.
 2. Hand application by pneumatic spray is acceptable.
- I. Symbols: Use a suitable template that will provide a pavement marking with true, sharp edges and ends, of the design and size indicated.

3.4 DRYING, PROTECTION, AND REPLACEMENT

- A. Protect newly painted markings so that paint is not picked up by tires, smeared, or tracked.
- B. Provide barricades, warning signs, and flags as necessary to prevent traffic crossing newly painted markings.
- C. Allow paint to dry at least the minimum time specified by the applicable paint standard and not less than that recommended by the manufacturer.
- D. Remove and replace markings that are applied at less than minimum material rates; deviate from true alignment; exceed length and width tolerances; or show light spots, smears, or other deficiencies or irregularities.
- E. Remove markings in manner to avoid damage to the surface to which the marking was applied, using carefully controlled sand blasting, approved grinding equipment, or other approved method.
- F. Replace removed markings at no additional cost to Government/COTR.

END OF SECTION 31 17 23

SECTION 31 20 20 – EARTHWORK

PART 1 - GENERAL

1.1 SCOPE OF WORK

- A. Provide labor, material and equipment for excavating, backfilling, filling, grading and related work.
- B. Earthwork includes, but is not limited to, excavation, filling, compacting and grading in the areas shown on the drawings to obtain the required finished ground surface properly prepared to receive pavements, walks, building floor slabs, utilities, and drainage structures.
- C. The work includes ditching in soil areas of high moisture content to allow the soil to drain prior to making excavations.
- D. The work includes adjustment of moisture content up or down by discing of soils placed in fills if soil tests show drying to be necessary to meet compaction requirements.
- E. The work includes spreading topsoil in sufficient quantities to backfill islands, medians, and roadway shoulders and open graded areas.
- F. The work includes undercutting unsuitable soil materials and replacing with compacted approved soils.
- G. The work includes stockpiling approved soil material in convenient location and in sufficient quantity for use in backfill of walls.
- H. The work includes removal from the job of unsuitable, excess materials if pre-approved by Design Professional.
- I. The work includes importing material, if required, from offsite.

1.2 QUALITY ASSURANCE CRITERIA

A. Testing Laboratory

The Contractor will engage geotechnical engineering services for quality control testing during earthwork operations.

- B. Adjacent to buildings and in parking lots and roads, grade to within five hundredths (5/100) of a foot of the elevations and contours shown on the Drawings. In open areas, grade to within one-tenth of a foot of those shown on the Drawings. Hand dress grades under buildings, slabs, walks, and steps to obtain the required elevation as shown on the Drawings.
- C. Perform no unauthorized or unnecessary grading. This consists of removal of materials beyond the plan limits of grading and removal of materials beyond indicated subgrade elevation or dimensions without specific direction of the Design Professional. Provide necessary remedial work at the Construction Professional's expense.

- D. Submit certification by a Geotechnical Engineer that materials imported to the site contain no hazardous substances.

1.3 SAMPLES

- A. Deliver the following samples to testing and inspection service as directed by the Design Professional:
 - 1. Fifty-pound sample of each class fill material encountered as directed by the Geotechnical Engineer using care that samples are representative.
 - 2. Fifty-pound sample of proposed fill material.

1.4 SOILS REPORT

- A. Data concerning subsurface materials or conditions which are based upon soundings, test pits, test borings, or other means, have been obtained by the Design Professional for its use in designing the project. The accuracy or completeness of the data is not guaranteed; and therefore, the Construction Professional shall not rely on this information without independent verification. Neither Peach County nor Design Professional will be responsible in any way for additional compensation except as provided in the General Requirement Section – Changes due to Subsurface or Other Unforeseen Conditions.

PART 2 -PRODUCTS

2.1 SOIL MATERIALS

- A. Definitions:
 - 1. Satisfactory soil materials consist of soil material that has been submitted to and approved by the Geotechnical Engineer as satisfactory for backfill and fill.
 - 2. Backfill and Fill Materials: In general, all fill placed at the site, including on-site soils, should not contain rocks or lumps larger than four (4) inches in greatest dimension and contain no more than 15 percent larger than 2.5 inches. Structural fill soils should have a liquid limit less than 50, plastic index less than 30 and a standard Proctor maximum dry density (ASTM D698) greater than 90 pcf. Generally, soils classified as SP, SM, SC, ML or CL according to the Unified Soil Classification System are considered suitable for fill providing they meet the above criteria. The high-plasticity silt (MH) encountered in both borings should not be considered suitable for fill.

2.2 MODULAR UNIT RETAINING WALLS

- A. Use units of standard quality, free of chips and cracks, and consistent in color and tone with colors chosen.
- B. Remove defective units from the site.

PART 3 - EXECUTION

3.1 PROCEDURES

- A. After clearing and disposal is complete, strip from the top of the existing ground topsoil in all areas to be graded. Stockpile in approved locations where it will not interfere with building or utility operations. Use topsoil free from subsoil, debris and stones larger than 2" in diameter. Locate stockpiles as designated by the Design Professional. At the completion of the work, distribute topsoil over the grounds to form a minimum cover of 6 inches loose measure on graded areas to receive vegetation and other areas indicated by the Design Professional. Scarify subgrade prior to spreading topsoil. Form berms as directed to dispose of excess topsoil and haul off topsoil remaining. Import topsoil to meet the minimum coverage if onsite topsoil is insufficient.
- B. Perform exterior grading in accordance with the drawings to ease contours sloping away from the building from sides. In these cases, provide grades of sufficient pitch to drain water from the area.
- C. Graded Areas: Repair and reestablish grades to the required elevations and slopes if any settlement or washing occurs prior to the acceptance of the work. Fill to required subgrade levels any areas where settlement occurs.
- D. Temporary Grading and Drainage: Provide effective drainage for the entire site.
- E. Excavating: Make no footing excavations to the full depth indicated when freezing temperatures or rain is expected. When full depths are reached, protect bottoms from frost or rain if placing of concrete is delayed.
 - 1. The Geotechnical Engineer, or his qualified representative, shall check each foundation excavation utilizing hand probing and auger and dynamic cone penetrometer testing. This will reduce the risk of unsuitable or soft materials directly underlying the footings, which may be detrimental to the integrity of the structures.
 - 2. Excavate material of every description and whatever substance encountered, to dimensions and levels shown on the Drawings. Excavate work to be clean-cut and true with bottoms level and sound.
 - 2. Lab Testing: The Geotechnical Engineer will make necessary tests for required soil bearing values, and soil compaction.
 - 3. Existing Site Conditions: Excavate any existing depressions or trenches that are encountered and are entirely within the new building walls, or within 5 feet of walls, to solid sub-grade and fill with compacted gravel or concrete to underside of new foundation or floor slab.
 - 4. Unsuitable Bearing Material: Place the bottom of trenches, foundations and footings and base for paving on compacted suitable material. Remove loose materials, surface vegetation, debris and existing fill before any fill is placed. Proof roll the subgrade in the presence of the Geotechnical Engineer. Fill operations can then take place. Do not place footings until the Geotechnical Engineer and the Design Professional have examined and approved the soil upon which they will rest. If the bearing capacity at the levels indicated be found by the Testing Laboratory to be insufficient, the Design Professional may order the excavations carried to proper bearing. Inspect and approve excavations for footings carried deeper than required by error for proper bearing and then fill only with concrete, same as specified for footings, at no additional cost to the Owner or Design Professional. Provide a minimum of six (6) inches compacted crushed #57 stone between bottom of

footings and any rock encountered. Compact fill in accordance with requirements for backfill.

5. Extend excavation, to the depths and dimensions required by the Drawings, including removal of rock.

3.2 ROCK EXCAVATION

- A. When rock is encountered, clear away earth and notify the Design Professional. The Geotechnical Engineer will inspect material and issue written instructions. Do not excavate rock without written instructions.
- B. Blast in accordance with local ordinances, and obtain permits where required by law. Complete blasting before any building footing is poured.
- C. Remove excavated rock from the site.
- D. Use rock for rip-rap and erosion control as required by the plans. Meet the specifications for rip-rap.
- E. Excavate rock to 6" minimum below bottom of building slabs and footing, pavement, and piping.
- F. Measure Rock Excavation as follows:
 1. Mass Rock:
 - a. Quantity of rock excavation will be established from cross sections taken by the Geotechnical Engineer. Prior to any rock excavation, expose the rock to be removed which has not been cross sectioned by the Geotechnical Engineer or no payment will be made. Prior to payment for rock excavation, the Geotechnical Engineer will prepare final cross sections and verify that the rock has been removed to the proper elevation.
 - b. Rock removed before measurement will not receive compensation.
 - c. Calculate the quantity of rock using the following limits:
 - (1) To top of rock;
 - (2) To 6" below bottom of base course and 1'-0" beyond edge of paving for uncurbed paved areas;
 - (3) To vertical line one foot behind back of curb;
 - (4) To 0'- 6" below foundations and footings;
 - (5) To vertical faces located 1'-0" horizontal distance from each footing or foundation face;
 - (6) To 6" below bottom of slabs on grade;
 - (7) To finish grade in cut where rock is removed to finish grade. Where it is not so removed, to the finish rock surface.
 - (8) To 1'-0" outside forms for concrete work requiring forms.
 - (9) To neat outside dimensions for concrete work with no forms.

2. Trench Rock:

- a. Measure trench rock by taking level reading at reasonable intervals but not more than ten feet along the exposed trench length before removal of rock.
- b. Rock removed before measurement will not receive compensation.
- c. Calculate the quantity of rock using the following limits:
 - (1) To top of rock;
 - (2) To vertical faces 1'-0" beyond the outside of pipe barrel, each side;
 - (3) To 6" below the pipe barrel for the full trench width;
 - (4) To vertical faces 1'-0" horizontal distance beyond structures and manholes;
 - (5) To 6" below bottom of slab for structures.

3.3 MUCK EXCAVATION

- A. When muck is encountered notify the Geotechnical Engineer immediately. The Geotechnical Engineer will inspect the material and issue written instructions.
- B. Quantity of muck will be established from taking level reading by the Geotechnical Engineer. Take the readings at reasonable intervals to identify the contours of the area.
- C. Muck removed before measurement will not receive compensation.
- D. Calculate the quantity of muck by making surveys before and after removal. Base payment on the quantity of muck removed as calculated using the surveys.

3.4 EXCAVATION EMBANKMENT AND BRACING

- A. Accept full responsibility for excavations. Protect excavation embankments against collapse. Where possible, make embankments over 5'-0" high at a slope not greater than 2:1 unless a steeper slope is recommended by a Registered Geotechnical Engineer.
- B. Where it is not possible to provide a safe environment for slopes, temporarily support banks and maintain securely until permanent support has been provided.
- C. Provide cross bracing and shoring to prevent collapse, where ditches or trenches are over 5'-0" deep.
- D. Provide bracing systems designed by a Registered Engineer experienced in such designs and acceptable to the Design Professional. Use the design drawings to show the work and sequence in its entirety and submit to the Design Professional prior to commencing the work.
- E. To prevent caving or settlement of earth adjacent to excavations, and for the protection of persons as well as property, provide shoring, bracing, and other similar material to meet the conditions in each particular case encountered. Leave in place until construction has reached a point where backfills behind walls or in ditches have been made and the need for shoring and bracing has been eliminated.

3.5 FOUNDATION TEST BORINGS

- A. Drill 2" diameter earth auger borings in foundation trenches for footings to a depth of 6'-0" below bearing. Locate boring and specify quantities as directed by the Design Professional and do not exceed the equivalent of one boring per 50 linear feet of foundation lines.

3.6 ADDED EXCAVATIONS

- A. Should the bearings at the levels indicated be found by the Geotechnical Engineer to be insufficient, the Design Professional may order the excavations carried to proper bearings. This work may be classified as additional work. Adjust the contract sum as provided for in other divisions.

3.7 FILLING AND BACKFILL

- A. Work Included: Include in the contract grading required for subgrade, under floor slabs, paved walks, drives, parking areas and against walls. Construct fills as herein specified.
 - 1. Structural Fill is defined as fill supporting retaining wall footings or any structure whatsoever and extending for a distance of ten feet (10') on each side of said structure measured at the finished grade, thereafter, tapering away at a 45-degree angle.
 - 2. Paving Area Fill is defined as fill supporting any asphalt, concrete paving, or special paving for parking of cars, or trucks, or concrete walks and extending for a distance of five feet (5') on each side of said area measured at the finished grade, thereafter, tapering away at a 45-degree angle.
 - 3. General Area Fill is defined as fill in the general grading area covering banks, lawns, hollows, drainage ditches.
- B. Clear and grub vegetation from areas to be filled. Scarify the ground to insure bond between the fill and the original surface. For fill to be placed on hillsides, plow deeply or, where existing ground is steeper than 2:1, bench the existing ground surface before beginning the filling operations.
- C. Place fill material in uniform, horizontal layers, not more than 8" thick. Moisten each layer as necessary to insure a proper bond and maximum compaction. Use suitable equipment to mix the material and insure uniform moisture content. Fully and uniformly compact each layer with a sheep's foot roller or vibratory roller of the proper size and weight to achieve specification.

3.8 PROOFROLLING

- A. Contact the Geotechnical Engineer at least 48 hours in advance of proofrolling.
- B. Clear and strip as herein specified areas to receive controlled structural and paving area fill. After removal of existing structures and topsoil, and before placement of any structural and paving area fill, proofroll that portion of the footing area and paved areas to receive fill to a distance of ten feet (10') beyond the limits. Accomplish proofrolling with a loaded twenty (20) ton minimum dump truck with two (2) complete coverages in each of two (2) perpendicular directions unless otherwise allowed. Accomplish proofrolling under the observation of the Geotechnical Engineer.

- C. Undercut up to 6 inches in depth any areas which 'pump' under the wheels of the loaded truck and proofroll again, at no cost to the Owner or Design Professional, if pumping continues after the 6 inches of undercutting, the Geotechnical Engineer will notify the Design Professional immediately and offer his professional recommendations as to the course of further construction. Undercutting below 6" may be classified as additional work. Adjust the contract sum as provided for in other divisions.
- D. Inspect the subgrade areas to receive structural and paving area fill and obtain approval of the Geotechnical Engineer/Design Professional before beginning structural fill and parking area fill operations.
- E. After filling to rough grade, proofroll as specified above the entire area of the building and paving until areas are approved. After proofrolled areas are approved, undertake excavation for footings.

3.9 BACKFILL AGAINST FOUNDATION WALLS, IN TRENCHES AND EXCAVATIONS, AND OTHER NECESSARY LOCATIONS

- A. Do not place backfill against foundation walls until foundation walls are braced and have cured sufficiently to develop the strength necessary to withstand, without damage, the pressures that will result from backfilling and compacting operations. Secure approval of the Geotechnical Engineer before commencing backfilling.
- B. Placing Backfill: Place all backfill material in uniform, approximately horizontal layers, not exceeding 8" before compacting. Compact each layer with pneumatic tampers or sheepsfoot roller to optimum moisture to produce a minimum of 95% of the standard proctor maximum dry density (ASTM specifications D-698). Use a testing laboratory to perform tests of fill density in place for every lift. Submit reports of tests to the Owner and Design Professional.
- C. Surplus Materials: Dispose of excess or unsuitable materials.

3.10 GRADING

- A. Place fill as specified for backfill except as noted herein. Accomplish compaction by traversing with a sheepsfoot roller or other approved heavy grading machinery. Compact fill to a minimum of 95% of the standard proctor maximum dry density (ASTM specifications D-698) to 12 inches below subgrade for structural fill areas for a minimum distance of ten feet outside of structure perimeter and for locations for future buildings. Compact parking area fill soils to 95% of the soil's standard density to 12 inches below subgrade. Compact general fill areas to 90% of the standard density.
- B. Compact the upper 12 inches of fill in structural fill areas and paving areas to 98% standard proctor density.
- C. Preparation of sub-grade for slabs: Remove roots and debris subject to termite attack, rot or corrosion and other material not suitable for fill. Fill holes and minor depressions and compact fillings as specified herein including re-compaction of sub-grade. Place subgrade soils within +/- 3% of the soils optimum moisture content per ASTM 698, contain no deleterious material and no rock fragments over 4" (inches) in diameter.

3.11 SITE GRADING

- A. Unless otherwise shown on the Drawings, slope the sub-grade evenly to provide drainage away from building walls. Provide berms and swales at top and swales, at bottom of banks, and at other breaks in grade. Grade the finish of the surface to be uniform and smooth and free from irregular surface change. The base of cuts and top edges of fills must be straight and even.
- B. Materials: Provide clean, suitable earth for additional fill if a sufficient quantity of suitable material is not available from the required excavation on the site.
- C. Grading Operations: Perform cutting, filling, backfilling and grading required to bring the entire project area to sub-grades as follows:
 - 1. For floor slabs, to underside of concrete slab; for surface area; including driveways, walks and parking area; to the underside of the respective surfacing as fixed by finished grades.
- D. Finished Grades: The words "finished grades" as used herein means the required final grade elevations indicated on the Drawings. If finished grades shown by spot elevations conflict with those shown by contours, the spot elevations will govern. Repair areas where settlement, erosion or other deviations occur in the grade. Re-compact and bring to the required section and grades at no additional expense to the Owner.

3.13 FIELD QUALITY CONTROL

- A. Quality Control Testing during Construction: Allow testing and inspection service to inspect and approve subgrades and fill layers before further construction work is performed. Test as follows:
 - 1. Perform field density tests in accordance with ASTM D-698.
- B. Test fill in place by laboratory approved by the Owner. Make tests continuously as necessary during the placing and compacting of the fill. Make tests in fill-in trenches outside of building areas. Obtain approval of fill material by the Testing Lab before it is placed.
- C. Test as follows:
 - 1. Structural Fill and Backfill: Make one test for each two-foot lift of each 2,000 sq. ft. of area.
 - 2. Paving Area Fill: Make one test for each two-foot lift of each 2,000 sq. ft. of area.
 - 3. General Area Fill: Make one test for each two-foot lift of each 10,000 sq. ft. of area.
 - 4. Backfill of Pipe Trenches: Make one test each joint of pipe length within trench.
- D. Pay for retesting of failed tests.

3.14 PROTECTION OF EXISTING TREES REMAINING

- A. Protect tops, trunks, and roots of trees to remain; box, fence or otherwise protect trees which are subject to site work or construction damage. See the Section CLEARING AND GRUBBING for tree protection and removal of any interfering branches. Immediately and properly trim and paint with a protective tree wound and sealing compound any cuts, or accidental injury to the bark or trunk. Remove protection only when danger from operations no longer exists.

3.15 PROTECTION OF ADJACENT PROPERTY

- A. For the duration of the construction and until release, protect adjoining property and right-of-way from any excessive drainage and debris. Do not enter upon adjoining property.

3.16 CLEAN-UP

- A. During the construction and clean-up, do not dump debris on any part of the property or in any unauthorized place. Remove debris, construction material, equipment, logs, stumps, boulders, or any other extraneous material deposited during construction from the site. Remove existing debris or other extraneous material from undisturbed areas. Material that is removed from the site is the property of the Construction Professional.

END OF SECTION 31 20 20

SECTION 31 25 20 – EROSION SEDIMENTATION AND POLLUTION CONTROL

PART 1 – GENERAL

1.1 SCOPE OF WORK

- A. Provide labor, material, and equipment for temporary and permanent management practices as shown on the plans, as contained in the Erosion, Sediment, and Pollution Control Plan (ESPCP), and as directed by the Owner and/or Design Professional during the life of the Contract to control erosion, storm water runoff, and pollution through the use of berms, dikes, dams, sediment basins, fiber mats, netting, mulches, grasses, slope drains, temporary silt fences, and other management practices.
- B. Coordinate temporary erosion control provisions with permanent erosion control features to assure economical, effective, and continuous erosion, sedimentation, and pollution control throughout the construction and stabilization period.
- C. Management practices required are not limited to the measures shown on the plans. Provide additional practices necessitated by actual conditions and methods.
- D. Silt and pollution leaving the site and any effects of the release are the sole and total responsibility of the Construction Professional as Primary, Secondary or Tertiary Permittee or Operator.
- E. Provide Sub Construction Professionals with a copy of the ESPCP. Post notices requiring Sub Construction Professionals to review and comply with the ESPCP.

1.2 RELATED DOCUMENTS

- A. Conform to the Georgia Water Quality Act, the Federal Clean Water Act, the rules and regulations promulgated to each of these Acts.
- B. Conform, at a minimum, to the "Manual for Erosion and Sediment Control in Georgia" (MESCG), latest edition, published by the Georgia State Soil & Water Conservation Commission.
- C. Maintain a copy of the MESCG on site throughout construction.

1.3 DEFINITIONS

- A. Refer to the Manual for Sediment Control in Georgia for a complete list of definitions.
- B. The partial list of definitions is provided for the Construction Professional's convenience only. Obtain copies of the reference documents and learn appropriate terms required to fully implement the ES & PC Plan.

C.

Terms Defined:

1. Best Management Practices (BMPs): schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of Georgia. BMPs include treatment requirements, operating procedures, and practices to control site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.
2. Comprehensive Monitoring Plan (CMP): The plan for monitoring of turbidity in receiving waters or outfalls.
3. Final Stabilization: soil disturbing activities at the site have been completed for unpaved areas and areas not covered by permanent structures, at least 70% of the soil surface is uniformly covered in permanent vegetation or equivalent permanent stabilization measures (the use of rip rap, gabions, permanent mulches or geotextiles). Permanent vegetation: planted trees, shrubs, perennial vines; a crop of perennial vegetation appropriate for the time of year and region; or a crop of annual vegetation and a seeding of target crop perennials appropriate for the region, so that within the growing season a 70% coverage by perennial vegetation shall be achieved. Final stabilization applies to each phase of construction. For linear construction projects on land used for agricultural or silvicultural purposes, accomplish final stabilization by stabilizing the disturbed land for its agricultural or silvicultural use.
4. General Construction Professional: the operator of the common development or site.
5. Operator: the entity that has the primary day-to-day operational control of those activities at the facility necessary to ensure compliance with Erosion, Sedimentation and Pollution Control Plan, Comprehensive Monitoring Program requirements and permit conditions.
6. Primary Permittee: the General Contractor and the Operator of a tract of land for a common development, or of a stand-alone facility that is not part of a common development; or a utility company when it is the only entity conducting a construction activity on a piece of property.
7. Qualified Personnel: a person who has successfully completed an erosion and sediment control short course eligible for continuing education units, or an equivalent course approved by EPD and the State Soil and Water Conservation Commission.
8. Sediment: solid material, both organic and inorganic, that is in suspension, is being transported, or has been moved from its site of origin by, wind, water, ice, or gravity as a product of erosion.
9. Waters of Georgia or Waters of the State: rivers, streams, creeks, branches, lakes, reservoirs, ponds, drainage systems, springs, wells, wetlands, and other bodies of surface or subsurface water, natural or artificial, lying within or forming a part of the boundaries of the state which are not entirely confined and retained completely upon the property of a single individual, partnership, or corporation.

1.4 QUALITY ASSURANCE CRITERIA

- A. Project Review: Prior to the preconstruction conference, review in detail the ES & PC Plan.
- B. Preconstruction Conference: At the preconstruction conference submit for acceptance a detailed schedule for accomplishment of temporary and permanent erosion control work and installation of BMPs, for clearing and grubbing, grading, structures at watercourses, construction, paving and other job activities. Submit for acceptance a proposed method of erosion control for haul roads and borrow pits and a plan for disposal of waste materials.

- C. Provide qualified personnel to supervise provision and maintenance of management practices.

PART 2 - PRODUCTS

2.1 SILT FENCE

A. Filter Fabrics:

1. Synthetic Fabric: Use filter fabric composed of strong rot-proof synthetic fibers formed into a fabric of either woven or non-woven type. Use fabric free of any treatment or coating which might significantly alter its physical properties. Use fabric containing stabilizers or inhibitors to make the filaments resistant to deterioration resulting from exposure to sunlight or heat. Use a pervious sheet of synthetic fibers oriented into a stable network so that the fibers retain their relative position with respect to each other. Finish the edges of the fabric to prevent the outer yarn from pulling away from the fabric. Use fabric free of defects or flaws which significantly affect its physical and/or filtering properties. Use fabric with a minimum width of 36 inches. Sew or bond sheets of fabric together. No deviation from any physical requirements will be permitted due to the presence of the seam.

- B. Posts: Straight steel posts, 1.33 pounds per linear foot min., 5 feet long, at 4 feet max. o.c., 1-3/4 inches wide, which have projections for fastening the wire to the fence.
- C. Woven Wire Fence: Wire fence fabric at least 32 inches high, with at least 6 horizontal wires. Vertical wires spaced 6 inches apart. Top and bottom wires at least 10 gage. Other wires at least 14 gage.
- D. Wire staples: Wire No. 9 staple at least 1 ½ inches long.
- E. MESCG: Meet MESCG regulations, Type C Application, per Table6-20.5.

2.2 DOWNDRAINS AND STORM DRAIN PIPES

- A. Downdrains: HDPE Pipe or Corrugated Plastic Pipe per the Section STORM DRAINAGE.
- B. Storm Drains: Per the Section STORM DRAINAGE.

2.3 STONE

- A. Rip Rap: Quarried solid stone showing no quarrying marks, minimum size per the plans.
- B. Stabilization Stone: Cleaned, crushed stone, #57, meeting Georgia Dept. of Transportation specifications.

2.4 CONCRETE

- A. Portland Cement, minimum 3000 psi compressive strength at 28 days.

- B. Course aggregate crushed stone meeting ASTM C33.

2.5. MATS AND BLANKETS

- A. Jute or Hemp Mat: Woven, 76 to 80 warpings per 4 foot width, 39 to 43 weftings per 3 foot length, 0.9 pounds per square yard minimum, 1.5 pounds per square yard maximum.
- B. Excelsior Blanket: 80% of fibers 6" min. length, smolder resistant, photo-degradable plastic mesh, maximum 1-1/2 x 3 inches, 1/4 inch min. thickness, 0.8 pounds per square yard.
- C. Coconut Fiber Blanket: 100% coconut, 1/4" min. thickness, 48" min. width, 0.5 pounds per square yard, photo-degradable plastic mesh 5/8" x 5/8" maximum.
- D. Wood Fiber Blanket: Free of germination inhibitors, photo-degradable plastic mesh, 5/8" x 3/4" max. spacing, 0.35 pounds per square yard minimum dry weight.

2.6 POLYMERS:

- A. Anionic polyacrylamide soil binding agents, environmentally benign, 0.05% monomer by weight.

PART 3 - EXECUTION

3.1 GENERAL REQUIREMENTS

- A. Install management practices in accordance with the ES & PC Plan, the MESCG, and the NPDES General Permit.
- B. Maintain management practices throughout construction and until the site is finally stabilized.
- C. Implement the Comprehensive Monitoring Program.
- D. Submit reports as required by the local jurisdiction, state, and federal government.
- E. Retain records as required by the NPDES General Permit.
- F. Submit the Notice of Intent and Notice of Termination.

3.2 LIMITS OF CONSTRUCTION

- A. The Owner has the authority to limit the surface area of erodible earth material exposed by clearing and grubbing, excavation, borrow and fill operations. Provide immediate permanent or temporary erosion control measures to prevent contamination of adjacent watercourses, lakes, ponds, other water impoundments and other waters of the State. Such work may involve the construction of temporary berms, dikes, dams, sediment basins, slope drains, and use of temporary mulches, mats, seeding, or other control devices or methods as necessary to control erosion. Seed and mulch cut and fill slopes as the excavation proceeds to the extent shown on the ESPCP.

- B. Incorporate all permanent management practices into the project at the earliest practicable time as outlined in the activity schedule. Use temporary management practices to correct conditions that develop during construction; that are needed prior to installation of permanent pollution control features; or that are needed temporarily to control erosion that develops during normal construction practices, but are not associated with permanent control features on the project.
- C. Schedule and perform clearing and grubbing operations so that grading operations and permanent management practices can be installed before or immediately thereafter; install management practice between successive construction stages as needed.
- D. The Owner may limit the area of excavation, borrow and embankment operations in progress commensurate with the capability and progress of the Construction Professional in keeping the finish grading, mulching, seeding, and other such permanent management practices current in accordance with the schedule.
- E. Under no conditions is the amount of surface area or erodible earth material exposed at one time by excavation or fill within the project area to exceed 750,000 square feet without the prior written approval of the Owner.
- F. The Design Professional and/or Owner may increase or decrease the amount of surface area or erodible earth material to be exposed at one time by clearing and grubbing, excavation, borrow and fill operations as determined by his analysis of project conditions.
- G. In the event of conflict between these requirements and erosion, sedimentation and pollution control laws, rules, or regulations or other Federal or State or local agencies, the more restrictive laws, rules, or regulations apply.

3.3 CONSTRUCTION OF STRUCTURES

A. Temporary Berms:

- 1. Construct a temporary berm of compacted soil, with a minimum width of 24 inches at the top and a minimum height of 12 inches with or without a shallow ditch, constructed at the top of fill slopes or transverse to centerline on fills. Grade temporary berms so as to drain to a compacted outlet at a slope drain. The area adjacent to the temporary berm in the vicinity of the slope drain must be properly graded to enable the inlet to function efficiently and with minimum ponding.
- 2. Extend transverse berms required on the downstream side of a slope drain across the grade to the highest point at approximately a 10-degree angle perpendicular to centerline. When practical and until final elevations are approached, construct embankments with a gradual slope to one side of the embankment to permit the placement of temporary berms and slope drains on only one side of the embankment.

B. Temporary Slope Drains

- 1. Use temporary slope drains consisting of stone gutters, fiber mats, plastic sheets, concrete or asphalt gutters, half-round pipe, metal pipe, plastic pipe, flexible rubber, or other materials which can be used as temporary measures to carry water accumulating in the cuts and on the fills down the slopes prior to provision of permanent facilities or growth of adequate ground cover on the slopes.
- 2. Do not use fiber matting and plastic sheeting on slopes steeper than 4:1 except for distances of 20 feet or less.

3. Adequately anchor temporary slope drains to the slope to prevent disruption by the force of the water flowing in the drains. Compact and concavely form the base for temporary slope drains to channel the water and hold the slope drain in place. Properly construct the inlet end to channel water into the temporary slope drain. Construct energy dissipators, sediment basins, or other devices at the outlet end of the slope drains to reduce erosion downstream. Remove temporary slope drains when no longer necessary and restore the site to match the surroundings.
- C. Sediment Control Structures
1. Utilize sediment control structures to control sediment at the foot of embankments where slope drains outlet; at the bottom as well as in the ditch lines atop waste sites; in the ditch lines or borrow pits. Use sediment control structures in most drainage situations to prevent excessive siltation of pipe structures. Use sediment structures at least twice as long as they are wide.
 2. When the use of temporary sediment control structures is discontinued, remove sediment accumulation and excavation backfill and properly compact. Restore the existing ground to its natural or intended condition.
- D. Check Dams:
1. Utilize check dams to retard stream flow and catch small sediment loads.
 2. Key check dams into the sides and bottom of the channel a minimum depth of 2 feet.
- E. Temporary Seeding and Mulching
1. Perform seeding and mulching in accordance with the drawings and specifications.
- F. Brush Barriers
1. Use brush barriers consisting of brush, tree trimmings, shrubs, plants, and other approved refuse from the clearing and grubbing operation. Construct the brush barriers approximately parallel to original ground contour. Compress the brush to an approximate height of 3 to 5 feet and approximate width of 5 to 10 feet. Do not support the embankment by the construction of brush barriers.
- G. Baled Hay or Straw Erosion Checks
1. Embed hay or straw erosion checks in the ground 4 to 6 inches to prevent water flowing under them. Anchor bales securely to the ground by driving wooden stakes through the bales into the ground. Retain bales in place until they rot. Remove after final stabilization. Keep the checks in good condition by replacing broken or damaged bales immediately after damage occurs. Normal debris clean-out is considered routine maintenance.
- H. Temporary Silt Fences
1. Place temporary silt fences on the natural ground, at the bottom of fill slopes, or other areas as shown or needed.
 2. Maintain the silt fence in a satisfactory condition for the duration of the project. Distribute the silt accumulation at the fence to conform to the grading plan. Remove silt fence from the site after final stabilization.

3.4 MAINTENANCE

- A. Maintain temporary management practices until no longer needed or permanent management practices are provided and the site is stabilized. Remove temporary materials.
- B. In the event that temporary management practices are required due to negligence, carelessness, or failure to provide permanent management practices as a part of work as scheduled, provide at no cost to the Owner.
- C. When silt deposited in sediment basins occupies more than 30% of the basin capacity, remove the silt. Remove the silt from the site unless otherwise permitted by the Owner. Restore the basin to the conditions and grades as shown on the Drawings.

3.5 EROSION CONTROL OUTSIDE PROJECT AREA

- A. Use temporary management practices for construction work outside the project area.

END OF SECTION 31 25 20

SECTION 32 31 13 – CHAIN LINK FENCES AND GATES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:
 - 1. High-security chain-link fences.
 - 2. Gates: Manual swing gates minimum 10' wide.

1.3 PERFORMANCE REQUIREMENTS

- A. Structural Performance: Chain-link fences and gate framework shall withstand the effects of gravity loads and the following loads and stresses within limits and under conditions indicated according to ASCE/SEI 7:
 - 1. Minimum Post Size: Determine according to ASTM F 1043 for framework up to 18 feet high and post spacing not to exceed 6 feet for Material.
 - 2. Fabric Tension: Provide fences in which fabric deflections do not exceed those indicated in Table X1.1 of ASTM F 1916 when tested by applying a 30-lbf force at midpoint between rails and horizontally between posts for every eighth lower panel along the fence line.
 - 3. Fence Post Rigidity: Provide fences in which post deflections do not exceed 3/4 inch when tested according to ASTM F 1916 by applying a 50-lbf force at midheight of every eighth post along the fence line.
- B. Lightning Protection System: Maximum grounding-resistance value of 25 ohms under normal dry conditions.

1.4 SUBMITTALS

- A. Product Data: For each type of product indicated, include construction details, material descriptions, dimensions of individual components and profiles, and finishes for chain-link fences and gates.
 - 1. Fence and gate posts, rails, and fittings.
 - 2. Chain-link fabric, reinforcements, and attachments.
 - 3. Gates and hardware.
- B. Shop Drawings: Include plans, elevations, sections, details, and attachments to other work. Show accessories, hardware, gate operation, and operational clearances.
 - 1. Gate Operator: None required for this project.
 - 2. Wiring Diagrams: None required for this project.
- C. Samples for Initial Selection: For components with factory-applied color finishes.

- D. Samples for Verification: Prepared on Samples of size indicated below:
 - 1. Polymer-Coated Components: In 6-inch lengths for components and on full-sized units for accessories.
- E. Product Certificates: For each type of chain-link fence and gate, from manufacturer.
- F. Product Test Reports: For framing strength according to ASTM F 1043.
- G. Field quality-control reports.
- H. Operation and Maintenance Data: For the following to include in emergency, operation, and maintenance manuals:
 - 1. Polymer finishes.
 - 2. Gate hardware.
 - 3. Gate operator.
- I. Warranty: Sample warranty.

1.5 QUALITY ASSURANCE

- A. Testing Agency Qualifications: For testing fence grounding. Member company of NETA or an NRTL.
 - 1. Testing Agency's Field Supervisor: Currently certified by NETA to supervise on-site testing.
- B. Emergency Access Requirements: Comply with requirements of Peach County.
- C. Mockups: If requested, build mockups to set quality standards for fabrication and installation.
 - 1. Include 10-foot length of fence.
- E. Pre-installation Conference: Conduct conference at Project site.
 - 1. Inspect and discuss electrical roughing-in, equipment bases, and other preparatory work specified elsewhere.
 - 2. Review coordination of soil sterilization with work specified elsewhere.
 - 3. Review sequence of operation for each type of gate operator.
 - 4. Review coordination of interlocked equipment specified in this Section and elsewhere.
 - 5. Review required testing, inspecting, and certifying procedures.

1.6 PROJECT CONDITIONS

- A. Field Measurements: Verify layout information for chain-link fences and gates shown on Drawings in relation to property survey and existing structures. Verify dimensions by field measurements.

1.7 WARRANTY

- A. Warranty: Installer agrees to repair or replace components of high-security chain-link fences and gates that fail in materials or workmanship within specified warranty period.
 - 1. Failures include, but are not limited to, the following:
 - a. Deflection of fence fabric beyond design limits.
 - b. Deterioration of metals, metal finishes, and other materials beyond normal weathering.
 - c. Faulty operation of gate operators and controls.
 - 2. Warranty Period: Five years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 CHAIN-LINK FENCE FABRIC

- A. Chain-Link Fence Fabric: Provide fabric in one-piece heights measured between top and bottom of outer edge of selvage. Comply with CLFMI Product Manual and with requirements indicated below:
 - 1. Fabric Height: 6 Ft.
 - a. Steel Wire Fabric: Wire with a diameter of 0.148 inch.
 - 1) Mesh Size: 2 inches.
 - 2. Fabric Heights and Overlap: As indicated on Drawings.
 - a. Steel Wire Fabric: Wire with a diameter of 0.148 inch.
 - 1) Mesh Size: 2 inches.
 - 3. Aluminum-Coated Fabric: ASTM A 491, Type I.
 - 4. Zinc-Coated Fabric: ASTM A 392, Type II, with zinc coating.
 - 5. Zn-5-Al-MM Aluminum-Mischmetal-Coated Fabric: ASTM F 1345, Type III, Class 2, 1.0 oz./sq. ft.
 - 6. Polymer-Coated Fabric: ASTM F 668, Class 2b over aluminum-coated steel wire.
 - a. Color: As selected by design professional from manufacturer's full range, complying with ASTM F 934.
 - 7. Coat selvage ends of fabric that is metallic coated before the weaving process with manufacturer's standard clear protective coating.
 - 8. Selvage: Twisted and barbed top and bottom.

2.2 SECURITY FENCE FRAMING

- A. Posts and Rails: Comply with ASTM F 1043 for framing, including rails, braces, and line; terminal; and corner posts.

1. Fence Height: 8 Ft. or as indicated on Drawings.
2. Light Industrial Strength: Material Group IA, round steel pipe, Schedule 40.
 - a. Line Post: 2.375 inches.
 - b. End, Corner, and Pull Post: 2.875 inches in diameter.
3. Rail Members: Intermediate, top and brace rails complying with ASTM F 1043 for Heavy Industrial.
4. Metallic Coating for Steel Framing:
 - a. Type A, consisting of not less than minimum 2.0-oz./sq. ft. average zinc coating per ASTM A 123 or 4.0-oz./sq. ft. zinc coating per ASTM A 653.
 - b. Type B, zinc with organic overcoat, consisting of a minimum of 0.9 oz./sq. ft. of zinc after welding, a chromate conversion coating, and a clear, verifiable polymer film.
 - c. External, Type B, zinc with organic overcoat, consisting of a minimum of 0.9 oz./sq. ft. of zinc after welding, a chromate conversion coating, and a clear, verifiable polymer film. Internal, Type D, consisting of 81 percent, not less than 0.3-milthick, zinc-pigmented coating.
 - d. Type C, Zn-5-Al-MM alloy, consisting of not less than 1.8-oz./sq. ft. coating.
 - e. Coatings: Any coating above.
5. Polymer coating over metallic coating.
 - a. Color: As selected by Owner from manufacturer's full range, complying with ASTM F 934.

2.3 TENSION WIRE

- A. Metallic-Coated Steel Wire: 0.177-inch - diameter, marcelled tension wire complying with ASTM A 817 and ASTM A 824, with the following metallic coating:
 1. Type I, aluminum coated (aluminized).
 2. Type II, zinc coated (galvanized) with Class 5 minimum coating weight of not less than 2.0 oz./sq. ft. of uncoated wire surface.
- B. Polymer-Coated Steel Wire: 0.177-inch-diameter, tension wire complying with ASTM F 1664.
 1. Color: As selected by Owner from manufacturer's full range, complying with ASTM F 934.

2.4 SWING GATES

- A. General: Comply with ASTM F 900 for gate posts with single and double swing gate types.
 1. Gate Leaf Width: 36 inches.
 2. Gate Fabric Height: As indicated.
- B. Pipe and Tubing:
 1. Zinc-Coated Steel: Comply with ASTM F 1043 and ASTM F 1083; protective coating and finish to match fence framing.
 2. Aluminum: Comply with ASTM B 429; manufacturer's standard finish.
 3. Gate Posts: As indicated on plans
 4. Gate Frames and Bracing: As indicated on plans.

- C. Frame Corner Construction: Welded or assembled with corner fittings and 3/8-inch- diameter, adjustable truss rods for panels 5 feet or wider.
- D. Extended Gate Posts and Frame Members: Extend above top of chain-link fabric at both ends of gate frame as required to attach barbed wire or tape assemblies.
- E. Provide separate isolated gate frame according to ASTM F 1916 and as indicated.
 - 1. Separation between Hinge and Latch Post and Fence Termination Post: 2 inches minimum, 2-1/2 inches maximum.
- F. Hardware: Comply with ASTM F 1916.
 - 1. Hinges: 180-degree inward swing.
 - 2. Latches permitting operation from both sides of gate with provision for padlocking accessible from both sides of gate.
 - 3. Padlock and Chain: Owner furnished.
 - 4. Lock: Manufacturer's standard internal device.
 - 5. Closer: Manufacturer's standard.
 - 6. For gates 14 feet and higher, add locking device to transom.

2.5 FITTINGS

- A. General: Comply with ASTM F 626.
- B. Post Caps: Provide for each post.
 - 1. Provide line post caps with loop to receive tension wire or top rail.
- C. Rail and Brace Ends: For each gate, corner, pull, and end post.
- D. Rail Fittings: Provide the following:
 - 1. Top-Rail Sleeves: Pressed steel or round steel tubing not less than 6 inches long.
 - 2. Rail Clamps: Line and corner boulevard clamps for connecting intermediate and bottom rails in the fence line to line posts.
- E. Tension and Brace Bands, Tension Bars, and Truss Rod Assemblies: Comply with ASTM F 2611.
- F. Barbed Wire Arms: Pressed steel or cast iron or Aluminum, with clips, slots, or other means for attaching strands of barbed wire, and means for attaching to posts; for each post unless otherwise indicated, and as follows:
 - 1. Provide line posts with arms that accommodate top rail or tension wire.
 - 2. Provide corner arms at fence corner posts, unless extended posts are indicated.
 - 3. Type I, single slanted arm.
 - 4. Type II, single vertical arm.
 - 5. Type III, V-shaped arm.
 - 6. Type IV, A-shaped arm.
 - 7. Bolts or rivets for connection to post.

- G. Tie Wires, Clips, and Fasteners: Comply with ASTM F 626 and ASTM F 1916.
 - 1. High-Security Round Wire Ties: For attaching chain-link fabric to posts, rails, and frames, complying with the following:
 - a. Metallic-Coated Steel: 0.148-inch diameter wire; aluminum coating.
 - b. Stainless steel.
- H. Power-Driven Fabric Fasteners: Comply with ASTM F 1916.
- I. Finish:
 - 1. Metallic Coating for Pressed Steel or Cast Iron: Not less than 1.2 oz. /sq. ft. of zinc.
 - a. Polymer coating over metallic coating.
 - 2. Aluminum: Mill finish.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine areas and conditions, with Installer present, for compliance with requirements for property lines and legal boundaries, site clearing, earthwork, pavement work, and other conditions affecting performance of the Work.
 - 1. Do not begin installation before final grading is completed unless otherwise permitted by Architect.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Stake locations of fence lines, gates, and terminal posts. Do not exceed intervals of 500 feet or line of sight between stakes. Indicate locations of utilities, lawn sprinkler system, underground structures, benchmarks, and property monuments.

3.3 INSTALLATION, GENERAL

- A. Install chain-link fencing to comply with ASTM F 567 or ASTM F 1916, and more stringent requirements specified.
 - 1. Install fencing on established boundary lines inside property line.

3.4 CHAIN-LINK FENCE INSTALLATION

- A. Post Excavation: Drill or hand-excavate holes for posts to diameters and spacing indicated, in firm, undisturbed soil.

- B. Post Setting: Set posts in 3000i concrete or with mechanical anchors at indicated spacing into firm, undisturbed soil.
1. Verify that posts are set plumb, aligned, and at correct height and spacing, and hold in position during setting with concrete or mechanical devices.
 2. Concrete Fill: Place concrete around posts to dimensions indicated and vibrate or tamp for consolidation. Protect aboveground portion of posts from concrete splatter.
 - a. Exposed Concrete: Extend 2 inches above grade; shape and smooth to shed water.
 - b. Concealed Concrete: Top 2 inches below grade to allow covering with surface material.
 - c. Posts Set into Concrete in Sleeves: Use steel pipe sleeves preset and anchored into concrete for installing posts. After posts have been inserted into sleeves, fill annular space between post and sleeve with nonshrink, nonmetallic grout, mixed and placed to comply with anchoring material manufacturer's written instructions, and finished sloped to drain water away from post.
 - d. Posts Set into Voids in Concrete: Form or core drill holes not less than 5 inches deep and 3/4 inch larger than OD of post. Clean holes of loose material, insert posts, and fill annular space between post and concrete with nonshrink, nonmetallic grout, mixed and placed to comply with anchoring material manufacturer's written instructions, and finished sloped to drain water away from post.
- C. Terminal Posts: Locate and install terminal end, corner, and gate posts per ASTM F 567 and terminal pull posts at changes in horizontal or vertical alignment of 15 degrees or more, at any abrupt change in grade, and at intervals not greater than 500 feet. For runs exceeding 500 feet, space pull posts an equal distance between corner or end posts.
- D. Line Posts: Space line posts uniformly at 10 feet o.c.
- E. Post Bracing and Intermediate Rails: Install according to ASTM F 567, maintaining plumb position and alignment of fencing. Diagonally brace terminal posts to adjacent line posts with truss rods and turnbuckles. Install braces at end and gate posts and at both sides of corner and pull posts.
1. Locate horizontal braces at midheight of fabric 72 inches or higher, on fences with top rail and at two-third fabric height on fences without top rail. Install so posts are plumb when diagonal rod is under proper tension.
- F. Barbed Wire Arms: Bolt or rivet to top of post. Angle single arms away from approach side of fence.
- G. Tension Wire: Install according to ASTM F 567 and ASTM F 1916, maintaining plumb position and alignment of fencing. Pull wire taut, without sags. Fasten fabric to tension wire with 0.120-inch-diameter hog rings of same material and finish as fabric wire, spaced a maximum of 24 inches o.c. Install tension wire in locations indicated before stretching fabric. Provide horizontal tension wire at the following locations:
1. Extended along top and bottom of fence fabric. Install top tension wire through post cap loops. Install bottom tension wire within 6 inches of bottom of fabric and tie to each post with not less than same diameter and type of wire.
 2. Extended along top of barbed wire arms or extended posts and top of fence fabric for supporting barbed tape.
- H. Top Rail: Install according to ASTM F 567, maintaining plumb position and alignment of fencing. Run rail continuously through line post caps, bending to radius for curved runs and terminating

into rail end attached to posts or post caps fabricated to receive rail at terminal posts. Provide expansion couplings as recommended by fencing manufacturer.

- I. Bottom Rails: Install and secure to posts with fittings; anchor rail at midspan to concrete footing.
- J. Chain-Link Fabric: Apply fabric on the approach side of fence, inside of enclosing framework. Pull fabric taut and tie to posts, rails, and tension wires. Anchor to framework so fabric remains under tension after pulling force is released.
 - 1. Leave 2 inches between finish grade or surface and bottom selvage unless otherwise indicated.
 - 2. Where indicated, bury an 18-inch-wide, polymer-coated fabric 12 inches (305 mm) into trench; overlap above-grade fabric 6 inches and secure to bottom rail with tie wires. Backfill and compact trench.
 - 3. Overlapping Fabric: At or between post or rail according to ASTM F 1916, with wire ties or steel strap method.
- K. Tension or Stretcher Bars: Thread through fabric and secure to end, corner, pull, and gate posts with tension bands spaced not more than 15 inches o.c.
- L. Tie Wires: Power-fastened or manually fastened ties configured to wrap a full 360 degrees around rail or post and a minimum of one complete diamond of fabric. Twist ends one and one-half machine twists or three full manual twists, and cut off protruding ends to preclude untwisting by hand.
 - 1. Maximum Spacing: Tie fabric to line posts at 12 inches o.c. and to braces at 24 inches o.c.
- M. Power-Driven Fasteners: Fasten 0.192- or 0.148-inch wire fabric with 2- or 1-inch mesh size.
 - 1. Fasten fabric to line posts 12 inches o.c. and to braces 24 inches o.c.
- N. Fasteners: Install nuts for tension bands and carriage bolts on the side of fence opposite the fabric side. Peen ends of bolts or score threads to prevent removal of nuts.
- O. Barbed Wire: Install barbed wire uniformly spaced. Pull wire taut, install securely to extension arms, and secure to end post or terminal arms.
- P. Barbed Tape: Comply with ASTM F 1911. Install barbed tape uniformly in configurations indicated and fasten securely to prevent movement or displacement.
- Q. Ground Barrier Stakes: Stake coils at 10 feet o.c., driven to full depth.

3.5 GATE INSTALLATION

- A. Install gates according to manufacturer's written instructions, level, plumb, and secure for full opening without interference. Attach fabric as for fencing. Attach hardware using tamper resistant or concealed means. Install ground-set items in concrete for anchorage. Adjust hardware for smooth operation and lubricate where necessary.

3.6 GATE OPERATOR INSTALLATION

- A. General: Install gate operators according to manufacturer's written instructions, aligned and true to fence line and grade.

- B. Excavation for Support Posts, Pedestals and Equipment Bases/Pads: Hand-excavate holes for bases/pads, in firm, undisturbed soil to dimensions and depths and at locations as required by gate operator component manufacturer's written instructions and as indicated.
- C. Vehicle Loop Detector System: Cut grooves in pavement and bury and seal wire loop according to manufacturer's written instructions. Connect to equipment operated by detector.
- D. Comply with NFPA 70 and manufacturer's written instructions for grounding of electric powered motors, controls, and other devices.

3.7 GROUNDING AND BONDING

- A. Fence Grounding: Install at maximum intervals of 100 feet except as follows:
 - 1. Gates and Other Fence Openings: Ground fence on each side of opening.
 - a. Bond metal gates to gate posts.
 - b. Bond across openings, with and without gates, except openings indicated as intentional fence discontinuities. Use No. 2 AWG wire and bury it at least 18 inches below finished grade.
- B. Protection at Crossings of Overhead Electrical Power Lines: Ground fence at location of crossing and at a maximum distance of 150 feet on each side of crossing.
- C. Fences Enclosing Electrical Power Distribution Equipment: Ground as required by IEEE C2 unless otherwise indicated.
- D. Grounding Method: At each grounding location, drive a grounding rod vertically until the top is 6 inches below finished grade. Connect rod to fence with No. 6 AWG conductor. Connect conductor to each fence component at grounding location, including the following:
 - 1. Make grounding connections to each barbed wire strand with wire-to-wire connectors designed for this purpose.
 - 2. Make grounding connections to each barbed tape coil with connectors designed for this purpose.
- E. Bonding Method for Gates: Connect bonding jumper between gate post and gate frame.
- F. Connections: Make connections to minimize possibility of galvanic action or electrolysis. Select connectors, connection hardware, conductors, and connection methods so metals in direct contact will be galvanically compatible.
 - 1. Use electroplated or hot-tin-coated materials to ensure high conductivity and to make contact points closer in order of galvanic series.
 - 2. Make connections with clean, bare metal at points of contact.
 - 3. Make aluminum-to-steel connections with stainless-steel separators and mechanical clamps.
 - 4. Make aluminum-to-galvanized-steel connections with tin-plated copper jumpers and mechanical clamps.
 - 5. Coat and seal connections having dissimilar metals with inert material to prevent future penetration of moisture to contact surfaces.

- G. Bonding to Lightning Protection System: If fence terminates at lightning-protected building or structure, ground the fence and bond the fence grounding conductor to lightning protection down conductor or lightning protection grounding conductor complying with NFPA 780.

3.8 SOIL STERILIZATION

- A. General: Comply with ASTM F 1916.
- B. Apply sterilant after completing grounding and other below-grade electrical work along fence line and within zone between double-row chain-link fence installation.
- C. Install soil separation fabric continuously between double-row chain-link fence installation, overlapping punctures and joints 6 inches.
- D. Lay continuous 3-inch-deep bed of crushed stone or washed gravel over soil separation fabric.
- E. Extend soil sterilization 4 feet beyond outside and inside of fence.

3.9 FIELD QUALITY CONTROL

- A. Fabric Testing: Test fabric tension according to ASTM F 1916.
- B. Fence Post Rigidity Testing: Test line posts for rigidity according to ASTM F 1916.
- C. Grounding-Resistance Testing: Engage a qualified testing agency to perform tests and inspections.
 - 1. Grounding-Resistance Tests: Subject completed grounding system to a megger test at each grounding location. Measure grounding resistance no fewer than two full days after last trace of precipitation, without soil having been moistened by any means other than natural drainage or seepage and without chemical treatment or other artificial means of reducing natural grounding resistance. Perform tests by two-point method according to IEEE 81.
 - 2. Excessive Grounding Resistance: If resistance to grounding exceeds specified value, notify Architect promptly. Include recommendations for reducing grounding resistance and a proposal to accomplish recommended work.
 - 3. Report: Prepare test reports, certified by testing agency, of grounding resistance at each test location. Include observations of weather and other phenomena that may affect test results.

3.10 ADJUSTING

- A. Gates: Adjust gates to operate smoothly, easily, and quietly, free of binding, warp, excessive deflection, distortion, nonalignment, misplacement, disruption, or malfunction, throughout entire operational range. Confirm that latches and locks engage accurately and securely without forcing or binding.
- B. Automatic Gate Operator: Energize circuits to electrical equipment and devices. Adjust operators, controls, safety devices, alarms, and limit switches.
 - 1. Hydraulic Operator: Purge operating system, adjust pressure and fluid levels, and check for leaks.
 - 2. Operational Test: After electrical circuitry has been energized, start units to confirm proper motor rotation and unit operation.

- 3. Test and adjust controls, alarms, and safeties. Replace damaged and malfunctioning controls and equipment.
- C. Lubricate hardware, gate operator, and other moving parts.

3.11 DEMONSTRATION

- A. Engage a factory-authorized service representative to train Owner's personnel to adjust, operate, and maintain high-security chain-link fences and gates.

END OF SECTION 32 31 13

SECTION 32 92 00 – TURFS AND GRASSES

PART 1 – GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01, apply to this Section.

1.02 SUMMARY

A. Section Includes:

- 1. Seeding.
- 2. Sodding.
- 3. Sprigging.
- 4. Grass paving.

B. Related Divisions:

- 1. Division 31 for topsoil stripping and stockpiling.
- 2. Division 31 for excavation, filling and backfilling, and rough grading.
- 3. Division 32 for turf irrigation.
- 4. Division 32 for border edgings.
- 5. Division 33 for subsurface drainage.

1.03 DEFINITIONS

- A. Duff Layer: The surface layer of native topsoil that is composed of mostly decayed leaves, twigs, and detritus.
- B. Finish Grade: Elevation of finished surface of planting soil.
- C. Manufactured Topsoil: Soil produced off-site by homogeneously blending mineral soils or sand with stabilized organic soil amendments to produce topsoil or planting soil.
- D. Pesticide: A substance or mixture intended for preventing, destroying, repelling, or mitigating a pest. This includes insecticides, miticides, herbicides, fungicides, rodenticides, and molluscicides. It also includes substances or mixtures intended for use as a plant regulator, defoliant, or desiccant.
- E. Pests: Living organisms that occur where they are not desired or that cause damage to plants, animals, or people. These include insects, mites, grubs, mollusks (snails and slugs), rodents (gophers, moles, and mice), unwanted plants (weeds), fungi, bacteria, and viruses.
- F. Planting Soil: Standardized topsoil; existing, native surface topsoil; existing, in-place surface soil; imported topsoil; or manufactured topsoil that is modified with soil amendments and perhaps fertilizers to produce a soil mixture best for plant growth.
- G. Subgrade: Surface or elevation of subsoil remaining after excavation is complete, or top surface of a fill or backfill before planting soil is placed.

- H. Subsoil: All soil beneath the topsoil layer of the soil profile, and typified by the lack of organic matter and soil organisms.
- I. Surface Soil: Soil that is present at the top layer of the existing soil profile at the Project site. In undisturbed areas, the surface soil is typically topsoil, but in disturbed areas such as urban environments, the surface soil can be subsoil.

1.04 SUBMITTALS

- A. Product Data: For each type of product indicated.
 - 1. Pesticides and Herbicides: Include product label and manufacturer's application instructions specific to this Project.
- B. Certification of Grass Seed: From seed vendor for each grass-seed monostand or mixture stating the botanical and common name, percentage by weight of each species and variety, and percentage of purity, germination, and weed seed. Include the year of production and date of packaging.
 - 1. Certification of each seed mixture for turfgrass sod or plugs. Include identification of source and name and telephone number of supplier.
- C. Qualification Data: For qualified landscape Installer.
- D. Product Certificates: For soil amendments and fertilizers, from manufacturer.
- E. Material Test Reports: For topsoil.
- F. Maintenance Instructions: Recommended procedures to be established by Owner for maintenance of turf and meadows, if applicable, during a calendar year. Submit before expiration of required initial maintenance periods.

1.05 QUALITY ASSURANCE

- A. Installer Qualifications: A qualified landscape Installer whose work has resulted in successful turf establishment.
 - 1. Professional Membership: Installer shall be a member in good standing of either the Professional Landcare Network or the American Nursery and Landscape Association.
 - 2. Experience: Three years' experience in turf installation in addition to requirements in Division 01 Section "Quality Requirements."
 - 3. Installer's Field Supervision: Require Installer to maintain an experienced full-time supervisor on Project site when work is in progress.
 - 4. Personnel Certifications: If requested, Installer's personnel assigned to the Work shall demonstrate certification in the following categories from the Professional Landcare Network:
 - a. Certified Landscape Technician - designated CLT-Exterior.
 - b. Certified Turfgrass Professional, designated CTP.
 - c. Certified Turfgrass Professional of Cool Season Lawns, designated CTP-CSL.
 - 5. Maintenance Proximity: Not more than two hours' normal travel time from Installer's place of business to Project site.

6. Pesticide Applicator: State licensed, commercial.
 - B. Soil-Testing Laboratory Qualifications: An independent laboratory or university laboratory, recognized by the State Department of Agriculture, with the experience and capability to conduct the testing indicated and that specializes in types of tests to be performed.
 - C. Soil Analysis: For each unamended soil type, furnish soil analysis and a written report by a qualified soil testing laboratory stating percentages of organic matter; gradation of sand, silt, and clay content; cation exchange capacity; deleterious material; pH; and mineral and plant-nutrient content of the soil.
 1. Testing methods and written recommendations shall comply with USDA's Handbook No. 60.
 2. The soil-testing laboratory shall oversee soil sampling, with depth, location, and number of samples to be taken per instructions from Architect. A minimum of three representative samples shall be taken from varied locations for each soil to be used or amended for planting purposes.
 3. Report suitability of tested soil for turf growth.
 - a. Based on the test results, state recommendations for soil treatments and soil amendments to be incorporated. State recommendations in weight per 1000 sq. ft. or volume per cu. yd. for nitrogen, phosphorus, and potash nutrients and soil amendments to be added to produce satisfactory planting soil suitable for healthy, viable plants.
 - b. Report presence of problem salts, minerals, or heavy metals, including aluminum, arsenic, barium, cadmium, chromium, cobalt, lead, lithium, and vanadium. If such problem materials are present, provide additional recommendations for corrective action.
 - D. Pre-installation Conference: Conduct conference at Project site.
- 1.06 DELIVERY, STORAGE, AND HANDLING
- A. Seed and Other Packaged Materials: Deliver packaged materials in original, unopened containers showing weight, certified analysis, name and address of manufacturer, and indication of conformance with state and federal laws, as applicable.
 - B. Sod: Harvest, deliver, store, and handle sod according to requirements in "Specifications for Turfgrass Sod Materials" and "Specifications for Turfgrass Sod Transplanting and Installation" in TPI's "Guideline Specifications to Turfgrass Sodding." Deliver sod in time for planting within 24 hours of harvesting. Protect sod from breakage and drying.
 - C. Bulk Materials:
 1. Do not dump or store bulk materials near structures, utilities, walkways and pavements, or on existing turf areas or plants.
 2. Provide erosion-control measures to prevent erosion or displacement of bulk materials, discharge of soil-bearing water runoff, and airborne dust reaching adjacent properties, water conveyance systems, or walkways.
 3. Accompany each delivery of bulk fertilizers, and soil amendments with appropriate certificates.

1.07 PROJECT CONDITIONS

- A. Planting Restrictions: Plant during one of the following periods. Coordinate planting periods with initial maintenance periods to provide required maintenance from date established by Contract.
 - 1. Spring Planting: February 1 through June 1.
 - 2. Fall Planting: September 1 through October 1 (for sod only. No sprigging).
- B. Weather Limitations: Proceed with planting only when existing and forecasted weather conditions permit planting to be performed when beneficial and optimum results may be obtained. Apply products during favorable weather conditions according to manufacturer's written instructions.

1.08 MAINTENANCE SERVICE

- A. Initial Turf Maintenance Service: Provide full maintenance by skilled employees of landscape Installer. Maintain as required in Part 3. Begin maintenance immediately after each area is planted and continue until acceptable turf is established but for not less than the following periods:
 - 1. Sodded Turf: As established by Contract.
 - 2. Sprigged Turf: As established by Contract.
- B. Continuing Maintenance Proposal: From Installer to Owner, in the form of a standard yearly (or other period) maintenance agreement, starting on date initial maintenance service is concluded. State services, obligations, conditions, and terms for agreement period and for future renewal options.

PART 2 PRODUCTS

2.01 SEED

- A. Grass Seed: Fresh, clean, dry, new-crop seed complying with AOSA's "Journal of Seed Technology; Rules for Testing Seeds" for purity and germination tolerances.
- B. Seed Species: Seed of grass species as listed on the drawings, with not less than 95 percent germination, not less than 90 percent pure seed, and not more than 0.5 percent weed seed:

2.02 TURFGRASS SOD

- A. Turfgrass Sod: Certified Number 1 Quality/Premium, including limitations on thatch, weeds, diseases, nematodes, and insects, complying with "Specifications for Turfgrass Sod Materials" in TPI's "Guideline Specifications to Turfgrass Sodding." Furnish viable sod of uniform density, color, and texture, strongly rooted, and capable of vigorous growth and development when planted.
- B. Turfgrass Species: Bermudagrass (*Cynodon dactylon*)

2.03 SPRIGS

- A. Sod Sprigs: Healthy living stems, rhizomes, or stolons with a minimum of two nodes and attached roots free of soil, of the following turfgrass species:
 - 1. Turfgrass Species: Bermudagrass (*Cynodon dactylon*)

2.04 INORGANIC SOIL AMENDMENTS

- A. Lime: ASTM C 602, agricultural liming material containing a minimum of 80 percent calcium carbonate equivalent and as follows:
 - 1. Class: O, with a minimum of 95 percent passing through No. 8 sieve and a minimum of 55 percent passing through No. 60 sieve.
 - 2. Provide lime in form of ground dolomitic limestone
- B. Sulfur: Granular, biodegradable, containing a minimum of 90 percent sulfur, and with a minimum of 99 percent passing through No. 6 sieve and a maximum of 10 percent passing through No. 40 sieve.
- C. Iron Sulfate: Granulated ferrous sulfate containing a minimum of 20 percent iron and 10 percent sulfur.
- D. Aluminum Sulfate: Commercial grade, unadulterated.
- E. Perlite: Horticultural perlite, soil amendment grade.
- F. Agricultural Gypsum: Minimum 90 percent calcium sulfate, finely ground with 90 percent passing through No. 50 sieve.
- G. Sand: Clean, washed, natural or manufactured, and free of toxic materials.
- H. Diatomaceous Earth: Calcined, 90 percent silica, with approximately 140 percent water absorption capacity by weight.
- I. Zeolites: Mineral clinoptilolite with at least 60 percent water absorption by weight.

2.05 ORGANIC SOIL AMENDMENTS

- A. Compost: Well-composted, stable, and weed-free organic matter, pH range of 5.5 to 8; moisture content 35 to 55 percent by weight; 100 percent passing through 3/4-inch sieve; soluble salt content of 5 to 10 decisiemens/m; not exceeding 0.5 percent inert contaminants and free of substances toxic to plantings; and as follows:
 - 1. Organic Matter Content: 50 to 60 percent of dry weight.
 - 2. Feedstock: Agricultural, food, or industrial residuals; biosolids; yard trimmings; or source separated or compostable mixed solid waste.
- B. Sphagnum Peat: Partially decomposed sphagnum peat moss, finely divided or of granular texture, with a pH range of 3.4 to 4.8.

- C. Muck Peat: Partially decomposed moss peat, native peat, or reed-sedge peat, finely divided or of granular texture, with a pH range of 6 to 7.5, and having a water-absorbing capacity of 1100 to 2000 percent.
- D. Wood Derivatives: Decomposed, nitrogen-treated sawdust, ground bark, or wood waste; of uniform texture and free of chips, stones, sticks, soil, or toxic materials.
 - 1. In lieu of decomposed wood derivatives, mix partially decomposed wood derivatives with ammonium nitrate at a minimum rate of 0.15 lb. /cu. ft. of loose sawdust or ground bark, or with ammonium sulfate at a minimum rate of 0.25 lb. /cu. ft. of loose sawdust or ground bark.
- E. Manure: Well-rotted, un-leached, stable or cattle manure containing not more than 25 percent by volume of straw, sawdust, or other bedding materials; free of toxic substances, stones, sticks, soil, weed seed, and material harmful to plant growth.

2.06 FERTILIZERS

- A. Bonemeal: Commercial, raw or steamed, finely ground; a minimum of 1 percent nitrogen and 10 percent phosphoric acid.
- B. Superphosphate: Commercial, phosphate mixture, soluble; a minimum of 20 percent available phosphoric acid.
- C. Commercial Fertilizer: Commercial-grade complete fertilizer of neutral character, consisting of fast- and slow-release nitrogen, 50 percent derived from natural organic sources of urea formaldehyde, phosphorous, and potassium in the following composition:
 - 1. Composition: 1 lb/1000 sq. ft. of actual nitrogen, 4 percent phosphorous, and 2 percent potassium, by weight.
 - 2. Composition: Nitrogen, phosphorous, and potassium in amounts recommended in soil reports from a qualified soil-testing laboratory.
- D. Slow-Release Fertilizer: Granular or pelleted fertilizer consisting of 50 percent water-insoluble nitrogen, phosphorus, and potassium in the following composition:
 - 1. Composition: 20 percent nitrogen, 10 percent phosphorous, and 10 percent potassium, by weight.
 - 2. Composition: Nitrogen, phosphorous, and potassium in amounts recommended in soil reports from a qualified soil-testing laboratory.

2.07 PLANTING SOILS

- A. Planting Soil: Existing, native surface topsoil formed under natural conditions with the duff layer retained during excavation process and stockpiled on-site. Verify suitability of native surface topsoil to produce viable planting soil. Clean soil of roots, plants, sod, stones, clay lumps, and other extraneous materials harmful to plant growth.
 - 1. Supplement with planting soil when quantities are insufficient.
 - 2. Mix existing, native surface topsoil with the following soil amendments and fertilizers in the following quantities to produce planting soil:
 - a. Ratio of Loose Compost to Topsoil by Volume: 1:3.

- b. Ratio of Loose Sphagnum Peat to Topsoil by Volume: Per Soil Testing report recommendations.
 - c. Ratio of Loose Wood Derivatives to Topsoil by Volume: Per Soil Testing report recommendations.
 - d. Weight of Lime per 1000 Sq. Ft.: Per Soil Testing report recommendations.
 - e. Weight of [Sulfur] [Iron Sulfate] [Aluminum Sulfate] per 1000 Sq. Ft.: Per Soil Testing report recommendations.
 - f. Weight of Agricultural Gypsum per 1000 Sq. Ft.: Per Soil Testing report recommendations.
 - g. Volume of Sand Plus 10 Percent Diatomaceous Earth per 1000 Sq. Ft.: Per Soil Testing report recommendations.
 - h. Weight of Bonemeal per 1000 Sq. Ft.: Per Soil Testing report recommendations.
 - i. Weight of Superphosphate per 1000 Sq. Ft.: Per Soil Testing report recommendations.
 - j. Weight of Commercial Fertilizer per 1000 Sq. Ft.: Per Soil Testing report recommendations.
 - k. Weight of Slow-Release Fertilizer per 1000 Sq. Ft.: Per Soil Testing report recommendations.
- B. Planting Soil: Existing, in-place surface soil. Verify suitability of existing surface soil to produce viable planting soil. Remove stones, roots, plants, sod, clods, clay lumps, pockets of coarse sand, concrete slurry, concrete layers or chunks, cement, plaster, building debris, and other extraneous materials harmful to plant growth. Mix surface soil with the following soil amendments in quantities amended per the soil testing report to produce planting soil:
- 1. Ratio of Loose Compost to Surface Soil by Volume: 1:3.
 - 2. Ratio of Loose Sphagnum Peat to Surface Soil by Volume: Per Soil Testing report recommendations.
 - 3. Ratio of Loose Wood Derivatives to Surface Soil by Volume: Per Soil Testing report recommendations.
 - 4. Weight of Lime per 1000 Sq. Ft.: Per Soil Testing report recommendations.
 - 5. Weight of Sulfur, Iron Sulfate, Aluminum Sulfate per 1000 Sq. Ft.: Per Soil Testing report recommendations.
 - 6. Weight of Agricultural Gypsum per 1000 Sq. Ft.: Per Soil Testing report recommendations.
 - 7. Volume of Sand Plus 10 Percent Diatomaceous Earth per 1000 Sq. Ft.: Per Soil Testing report recommendations.
 - 8. Weight of Bonemeal per 1000 Sq. Ft.: Per Soil Testing report recommendations.
 - 9. Weight of Superphosphate per 1000 Sq. Ft.: Per Soil Testing report recommendations.
 - 10. Weight of Commercial Fertilizer per 1000 Sq. Ft.: Per Soil Testing report recommendations.
 - 11. Weight of Slow-Release Fertilizer per 1000 Sq. Ft.: Per Soil Testing report recommendations.
- C. Planting Soil: Imported topsoil or manufactured topsoil from off-site sources. Obtain topsoil displaced from naturally well-drained construction or mining sites where topsoil occurs at least 4 inches deep; do not obtain from agricultural land, bogs or marshes.
- 1. Additional Properties of Imported Topsoil or Manufactured Topsoil: Screened and free of stones 1 inch or larger in any dimension; free of roots, plants, sod, clods, clay lumps, pockets of coarse sand, paint, paint washout, concrete slurry, concrete layers or chunks, cement, plaster, building debris, oils, gasoline, diesel fuel, paint thinner, turpentine, tar, roofing compound, acid, and other extraneous materials harmful to plant growth; free of obnoxious weeds and invasive plants including quack grass, Johnsongrass, poison ivy, nutsedge, nimblewill, Canada thistle, bindweed, bent grass, wild garlic, ground ivy, perennial sorrel, and bromegrass; not infested with nematodes, grubs, other pests, pest

- eggs, or other undesirable organisms and disease-causing plant pathogens; friable and with sufficient structure to give good tilth and aeration. Continuous, air-filled, porespace content on a volume/volume basis shall be at least 15 percent when moisture is present at field capacity. Soil shall have a field capacity of at least 15 percent on a dry weight basis.
2. Mix imported topsoil or manufactured topsoil with the following soil amendments in quantities amended per the soil testing report to produce planting soil:
 - a. Ratio of Loose Compost to Topsoil by Volume: 1:3.
 - b. Ratio of Loose Sphagnum Peat to Topsoil by Volume: Per Soil Testing report recommendations.
 - c. Ratio of Loose Wood Derivatives to Topsoil by Volume: Per Soil Testing report recommendations.
 - d. Weight of Lime per 1000 Sq. Ft.: Per Soil Testing report recommendations.
 - e. Weight of Sulfur, Iron Sulfate, Aluminum Sulfate per 1000 Sq. Ft.: Per Soil Testing report recommendations.
 - f. Weight of Agricultural Gypsum per 1000 Sq. Ft.: Per Soil Testing report recommendations.
 - g. Volume of Sand Plus 10 Percent Diatomaceous Earth per 1000 Sq. Ft.: Per Soil Testing report recommendations.
 - h. Weight of Bonemeal per 1000 Sq. Ft.: Per Soil Testing report recommendations.
 - i. Weight of Superphosphate per 1000 Sq. Ft.: Per Soil Testing report recommendations.
 - j. Weight of Commercial Fertilizer per 1000 Sq. Ft.: Per Soil Testing report recommendations.
 - k. Weight of Slow-Release Fertilizer per 1000 Sq. Ft.: Per Soil Testing report recommendations.

2.08 MULCHES

- A. Compost Mulch: Well-composted, stable, and weed-free organic matter, pH range of 5.5 to 8; moisture content 35 to 55 percent by weight; 100 percent passing through 1-inch sieve; soluble salt content of 2 to 5 decisiemens/m; not exceeding 0.5 percent inert contaminants and free of substances toxic to plantings; and as follows:
 1. Organic Matter Content: 50 to 60 percent of dry weight.
 2. Feedstock: Agricultural, food, or industrial residuals; biosolids; yard trimmings; or source separated or compostable mixed solid waste.
- B. Fiber Mulch: Biodegradable, dyed-wood, cellulose-fiber mulch; nontoxic and free of plant-growth or germination inhibitors; with a maximum moisture content of 15 percent and a pH range of 4.5 to 6.5.
- C. Nonasphaltic Tackifier: Colloidal tackifier recommended by fiber-mulch manufacturer for slurry application; nontoxic and free of plant-growth or germination inhibitors.

2.09 PESTICIDES

- A. General: Pesticide, registered and approved by EPA, acceptable to The City of Warner Robins, and of type recommended by manufacturer for each specific problem and as required for Project conditions and application. Do not use restricted pesticides unless authorized in writing by Peach County.

- B. Pre-Emergent Herbicide (Selective and Non-Selective): Effective for controlling the germination or growth of weeds within planted areas at the soil level directly below the mulch layer.
- C. Post-Emergent Herbicide (Selective and Non-Selective): Effective for controlling weed growth that has already germinated.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Examine areas to be planted for compliance with requirements and other conditions affecting performance.
 - 1. Verify that no foreign or deleterious material or liquid such as paint, paint washout, concrete slurry, concrete layers or chunks, cement, plaster, oils, gasoline, diesel fuel, paint thinner, turpentine, tar, roofing compound, or acid has been deposited in soil within a planting area.
 - 2. Do not mix or place soils and soil amendments in frozen, wet, or muddy conditions.
 - 3. Suspend soil spreading, grading, and tilling operations during periods of excessive soil moisture until the moisture content reaches acceptable levels to attain the required results.
 - 4. Uniformly moisten excessively dry soil that is not workable and which is too dusty.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.
- C. If contamination by foreign or deleterious material or liquid is present in soil within a planting area, remove the soil and contamination as directed by Owner and replace with new planting soil.

3.02 PREPARATION

- A. Protect structures, utilities, sidewalks, pavements, and other facilities, trees, shrubs, and plantings from damage caused by planting operations.
 - 1. Protect adjacent and adjoining areas from hydroseeding and hydromulching overspray.
 - 2. Protect grade stakes set by others until directed to remove them.
- B. Install erosion-control measures to prevent erosion or displacement of soils and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways.

3.03 TURF AREA PREPARATION

- A. Limit turf subgrade preparation to areas to be planted.
- B. Newly Graded Subgrades: Loosen subgrade to a minimum depth of 4 inches. Remove stones larger than 1 inch in any dimension and sticks, roots, rubbish, and other extraneous matter and legally dispose of them off Owner's property.
 - 1. Apply Type A fertilizer directly to subgrade before loosening.
 - 2. Thoroughly blend planting soil off-site before spreading or spread topsoil, apply soil amendments and fertilizer on surface, and thoroughly blend planting soil.

- a. Delay mixing fertilizer with planting soil if planting will not proceed within a few days.
 - b. Mix lime with dry soil before mixing fertilizer.
3. Spread planting soil to a depth of 4 inches but not less than required to meet finish grades after light rolling and natural settlement. Do not spread if planting soil or subgrade is frozen, muddy, or excessively wet.
- a. Spread approximately 1/2 the thickness of planting soil over loosened subgrade. Mix thoroughly into top 4 inches of subgrade. Spread remainder of planting soil.
 - b. Reduce elevation of planting soil to allow for soil thickness of sod.
- C. Unchanged Subgrades: If turf is to be planted in areas unaltered or undisturbed by excavating, grading, or surface-soil stripping operations, prepare surface soil as follows:
1. Remove existing grass, vegetation, and turf. Do not mix into surface soil.
 2. Loosen surface soil to a depth of at least 6 inches. Apply soil amendments and fertilizers according to planting soil mix proportions and mix thoroughly into top 6 inches of soil. Till soil to a homogeneous mixture of fine texture.
 - a. Apply fertilizer directly to surface soil before loosening.
 3. Remove stones larger than 1 inch in any dimension and sticks, roots, trash, and other extraneous matter.
 4. Legally dispose of waste material, including grass, vegetation, and turf, off Owner's property.
- D. Finish Grading: Grade planting areas to a smooth, uniform surface plane with loose, uniformly fine texture. Grade to within plus or minus 1/2 inch of finish elevation. Roll and rake, remove ridges, and fill depressions to meet finish grades. Limit finish grading to areas that can be planted in the immediate future.
- E. Moisten prepared area before planting if soil is dry. Water thoroughly and allow surface to dry before planting. Do not create muddy soil.
- F. Before planting, obtain Owner's acceptance of finish grading; restore planting areas if eroded or otherwise disturbed after finish grading.

3.04 PREPARATION FOR GRASS-PAVING MATERIALS

- A. Reduce subgrade elevation soil to allow for thickness of grass-paving system. Grade planting areas to a smooth, uniform surface plane with loose, uniformly fine texture. Grade so that installed paving is within plus or minus 1/2 inch of finish elevation. Roll and rake, remove ridges, and fill depressions.
- B. Install base course, sand course, sandy loam soil mix, proprietary growing mix and soil for paving fill as recommended by paving-material manufacturer for site conditions; comply with details shown on Drawings. Compact according to paving-material manufacturer's written instructions.
- C. Install paving mat and fasten according to paving-material manufacturer's written instructions.
- D. Before planting, fill cells of paving mat with sandy loam soil mix and compact according to manufacturer's written instructions.

- E. Moisten prepared area before planting if surface is dry. Water thoroughly and allow surface to dry before planting. Do not create muddy soil.

3.05 SODDING

- A. Lay sod within 24 hours of harvesting. Do not lay sod if dormant or if ground is frozen or muddy.
- B. Lay sod to form a solid mass with tightly fitted joints. Butt ends and sides of sod; do not stretch or overlap. Stagger sod strips or pads to offset joints in adjacent courses. Avoid damage to subgrade or sod during installation. Tamp and roll lightly to ensure contact with subgrade, eliminate air pockets, and form a smooth surface. Work sifted soil or fine sand into minor cracks between pieces of sod; remove excess to avoid smothering sod and adjacent grass.
 - 1. Lay sod across angle of slopes exceeding 1:3.
 - 2. Anchor sod on slopes exceeding 1:6 with wood pegs spaced as recommended by sod manufacturer but not less than 2 anchors per sod strip to prevent slippage.
- C. Saturate sod with fine water spray within two hours of planting. During first week after planting, water daily or more frequently as necessary to maintain moist soil to a minimum depth of 1-1/2 inches below sod.

3.06 SPRIGGING

- A. Plant freshly shredded sod sprigs in furrows 1-1/2 to 2 inches deep. Lightly roll and firm soil around sprigs after planting.
- B. Broadcast sprigs uniformly over prepared surface at a rate of 10 cu. ft./1000 sq. ft. and mechanically force sprigs into lightly moistened soil.
 - 1. Spread a 1/4-inch thick layer of planting soil on sprigs.
 - 2. Lightly roll and firm soil around sprigs after planting.
 - 3. Water sprigs immediately after planting and keep moist by frequent watering until well rooted.

3.07 TURF MAINTENANCE

- A. Maintain and establish turf by watering, fertilizing, weeding, mowing, trimming, replanting, and performing other operations as required to establish healthy, viable turf. Roll, re-grade, and replant bare or eroded areas and re-mulch to produce a uniformly smooth turf. Provide materials and installation the same as those used in the original installation.
 - 1. Fill in as necessary soil subsidence that may occur because of settling or other processes. Replace materials and turf damaged or lost in areas of subsidence.
 - 2. In areas where mulch has been disturbed by wind or maintenance operations, add new mulch and anchor as required to prevent displacement.
 - 3. Apply treatments as required to keep turf and soil free of pests and pathogens or disease. Use integrated pest management practices whenever possible to minimize the use of pesticides and reduce hazards.
- B. Watering: Install and maintain temporary piping, hoses, and turf-watering equipment to convey water from sources and to keep turf uniformly moist to a depth of 4 inches.

1. Schedule watering to prevent wilting, puddling, erosion, and displacement of sprigs or mulch.
 2. Water turf with fine spray at a minimum rate of 1 inch per week unless rainfall precipitation is adequate.
- C. Mow turf as soon as top growth is tall enough to cut. Repeat mowing to maintain specified height without cutting more than 1/3 of grass height. Remove no more than 1/3 of grass-leaf growth in initial or subsequent mowings. Do not delay mowing until grass blades bend over and become matted. Do not mow when grass is wet. Schedule initial and subsequent mowings to maintain the following grass height:
1. Mow bermudagrass to a height of 1/2 to 1 inch.
- D. Turf Post fertilization: Apply fertilizer after initial mowing and when grass is dry.
1. Use fertilizer that will provide actual nitrogen of at least 1 lb/1000 sq. ft. to turf area.

3.13 SATISFACTORY TURF

- A. Turf installations shall meet the following criteria as determined by Architect:
1. Satisfactory Sodded Turf: At end of maintenance period, a healthy, well-rooted, even-colored, viable turf has been established, free of weeds, open joints, bare areas, and surface irregularities.
 2. Satisfactory Sprigged Turf: At end of maintenance period, the required number of sprigs has been established as well-rooted, viable plants, and areas between sprigs are free of weeds and other undesirable vegetation.
- B. Use specified materials to reestablish turf that does not comply with requirements and continue maintenance until turf is satisfactory.

3.16 PESTICIDE APPLICATION

- A. Apply pesticides and other chemical products and biological control agents in accordance with requirements of Peach County and manufacturer's written recommendations. Coordinate applications with Owner's operations and others in proximity to the Work. Notify Owner before each application is performed.
- B. Post-Emergent Herbicides (Selective and Non-Selective): Apply only as necessary to treat already germinated weeds and in accordance with manufacturer's written recommendations.

3.17 CLEANUP AND PROTECTION

- A. Promptly remove soil and debris created by turf work from paved areas. Clean wheels of vehicles before leaving site to avoid tracking soil onto roads, walks, or other paved areas.
- B. Erect temporary fencing or barricades and warning signs as required to protect newly planted areas from traffic. Maintain fencing and barricades throughout initial maintenance period and remove after plantings are established.
- C. Remove non-degradable erosion-control measures after grass establishment period.

END OF SECTION 32 92 00

SECTION 33 41 20 – STORM DRAINAGE

PART 1 - GENERAL

1.1 SCOPE OF WORK

- A. Provide labor, materials, and equipment necessary for the construction of storm sewers, catch basins, headwalls, spillways, and related items, complete. Conduct in a manner not to conflict with paving, site grading, and other construction.

1.2 SUBMITTALS

- A. Manufacturer's Data: Upon request of the Design Professional, submit four copies of manufacturer's specifications and installation instructions to the Design Professional for the following products, including laboratory test reports, notarized certifications, or other data required to show compliance with these Specifications:
 - 1. Pipe, Fittings, and Joints;
 - 2. Granular material for pipe bedding;
 - 3. Drainage Casting and Iron Work.
- B. Where aluminized or polyethylene storm drain is proposed as an alternate, submit a letter from the Local Jurisdiction approving its use for the application intended.

1.3 REFERENCE STANDARD SPECIFICATIONS

- A. Conform to the requirements of "Standard Specifications for Construction of Roads and Bridges", Georgia Department of Transportation for storm sewer work.
- B. Where particular sections of the Reference Specifications are cited, comply with applicable Sections of the Reference Specifications.
- C. Conform to Local Codes and Specifications. Where conflicts arise between the Local Specifications and these specifications, Local requirements govern.

1.4 PROTECTION OF EXISTING FACILITIES

- A. Maintain in operating condition existing surface or subsurface utilities and repair or have repaired to the satisfaction of the Design Professional any damage to existing utilities.

1.5 CONFINED SPACES

- A. Take precautions including but not limited to the provision for ventilators, lights, pulleys, harnesses, communication equipment, and vapor detectors. Use only qualified, trained, and experienced personnel when working in manholes, vaults, pipes and other confined spaces.

PART 2 – PRODUCTS

2.1 MATERIALS

- A. Reinforced Concrete Pipe: Use pipe conforming to ASTM Specification C-76, Class III, unless otherwise specified or shown on the drawings.
- B. Bituminous Coated Corrugated Metal Pipe: Use corrugated metal pipe fully coated a minimum of 0.05" thick. Applicable articles and paragraphs under Storm Sewers, Georgia DOT Specifications, or Local Standards and Specifications, apply. Use corrugated pipe a minimum 16-gauge thickness.
- C. Aluminized steel Type 2 corrugated steel pipe: Hot dipped, CSP grade, coating wt. 1.00 oz. per square foot, AASHTO M-274, minimum gauge per Local Jurisdiction requirements.
- D. Hugger Bands: Match pipe material and coating with O-ring gaskets.
- E. Corrugated polyethylene pipe: Smooth-lined high density polyethylene, AASHTO M252 and AASHTO M294, Type S. Fittings per ASTM F405 and ASTM F667.
- F. Catch Basins, Drop Inlets, Headwalls, Junction Boxes, and Spillways:
 - 1. Structures: concrete and/or brick as detailed on contract Drawings.
 - 2. Concrete: conforming to the Site Concrete Section of these Specifications, minimum 28-day compressive strength of 3,000 psi.
 - 3. Brick: hard No.1 manufactured of clay or shale of uniform standard commercial size with straight, parallel edges and square corners, burned uniformly hard entirely through with uniform color and uniform abrasion, ASTM C32.
 - 4. Mortar: ASTM C270, type M.
 - 5. Sand: clean and sharp, and free from deleterious substances and containing not more than five (5) percent by volume of material passing 100 mesh sieve.
 - 6. Course aggregate: crushed stone of solid composition, free from dirt and debris, ASTM C33.
 - 7. Gratings: grey iron casting, ASTM A-48.
 - 8. Keep structures clean of all fallen masonry, silt, debris, and other foreign matter.
 - 9. Precast concrete structures: ASTM Specification C478.

PART 3 - EXECUTION

3.1 INSTALLATION REQUIREMENTS

- A. Preparation of Trenches for Pipe Laying.
 - 1. Keep the width of trenches at any point below top of pipe less than the outside diameter of pipe plus 16", to permit satisfactory jointing and thorough tamping of bedding material under and around pipe.
 - 2. Keep trenches free from water until the pipe is laid and trench backfilled and mortar has sufficiently hardened.

3. Shore, barricade and maintain trenches to protect workmen and the public from danger, in accordance with Local, State, and Federal regulations. Lift shoring as backfill is added to trench where shoring is to be removed.
 4. Take the depth of the trench at each grade board. Use the average of the two adjacent depths to compute the depth of the cut for that section. If drainage lines are placed by use of laser beam, measure trench depths at points where grade boards would otherwise be. Measure drainage line lengths horizontally from center to center of structures.
 5. Open no more than 300 feet of trench at any time.
- B. Preparation of Foundation for Pipe Laying
1. Form the foundation in the trench to prevent any subsequent settlement which might result in excessive pressure and consequent rupture of the pipes. Set batter boards at 50 foot intervals to check the line and invert grade.
 2. Remove rock in either ledge or boulder formation and replace with selected materials to provide a compacted earth cushion having a thickness between rock and pipe of at least 6". Where bell and spigot pipe is used, maintain cushion under bell as well as under straight portion of pipe.
 3. Whenever wet or otherwise unstable soil that is incapable of adequately supporting pipe is encountered in trench bottoms, remove material to depth required and replace to the proper grade with suitable fill material.
 4. Construct bedding surfaces for pipe to provide a firm foundation of uniform density throughout entire length of pipe. Carefully bed pipe in a soil foundation that has been accurately shaped and rounded to conform to lowest 1/4 of outside portion of circular pipe. When necessary, tamp bedding firm. Make bell holes and depressions for joints of length, depth, and width as to required properly make joints.
 5. Where bedding conditions dictate, lay the pipes in a concrete cradle supported on a masonry foundation carried to a soil of satisfactory bearing, or supported on a structure designed to carry the weight of pipe and its load to a firm bearing.
- C. Pipe Laying
1. Carefully examine each length of pipe before laying and reject any defective pipe.
 2. Commence the laying of pipes in finished trenches at the lowest point.
 3. Lay pipes with ends abutting and true to line and grade. Fit and match pipes so that when laid in the work, they will form a sewer with a smooth and uniform invert.
 4. Clean ends of pipe carefully before pipes are lowered into trenches.
 5. Set the joints firmly according to line and grade and join together to be structurally sound and water tight.
- D. Backfilling Trenches
1. After bedding has been prepared and pipe installed, place suitable fill material along both sides of pipe in layers not exceeding 6" in compacted depth. Bring backfill up evenly on both sides of pipe for its full length. Insure thorough compaction of fill under haunches of pipe. Thoroughly compact each layer with mechanical tampers or rammers. Continue this method of filling and compacting until fill has reached an elevation of at least 6" above the top of pipe. Backfill and compact remainder of trench by spreading and rolling, or compact by mechanical rammers or tampers in layers not exceeding 6".
 2. Wet down each layer of fill and backfill to obtain optimum moisture content. Compact to a minimum of 95% of the standard proctor maximum dry density (ASTM D-698).
 3. Do not puddle or water flood to consolidate the backfill.

4. Do not walk or work on the completed pipeline, except as necessary in tamping or backfilling, until the trench has been backfilled to a height of at least two feet (2') above the top of the pipes.
5. Fill trench simultaneously on both sides of the pipes in a manner that injurious side pressures do not occur.

E. Drainage Structures

1. Construct drainage structures as shown on drawings.
2. Excavate to required depth and compact the base upon which the structure is to be constructed to a firm even surface.
3. Construct forms for concrete structures of wood or metal. Brace and wire the forms that they will not give or warp under the pressure and loads contemplated in pouring the concrete. Tamp or spade concrete into place to eliminate honeycombing.
4. Brickwork
 - a. Lay brick in structures with shove joints completely filled with mortar. In no case are the joints to be made by grouting or by working in mortar after laying the brick. Horizontal joints must not exceed 1/2", vertical joints 1/4", on their interior face. In circular structures, lay bricks or blocks as headers, breaking joints between courses. Strike interior smooth with face of the wall.
 - b. "Rack back" or tooth unfinished brick masonry and when new work is jointed to the unfinished portion, cleaned the latter thoroughly.
 - c. Bond and key brick masonry of sides and arches. Exercise special care with each ring to prevent large joints at the back. Make joints normal to the section and avoid lipping of brick.

F. Flushing Sewers

1. Flush storm sewers with water in sufficient volume to obtain free flow through each line. Remove obstructions and correct defects discovered. Remove dirt and debris from structures.

3.2 RIP RAP

A. Requirements

1. Place a minimum of 10 sq. yds. of 50 lb. minimum stone at spillways and headwalls.
2. Place 50 lb. minimum stone for erosion control.

3.3 PAVEMENT CUTS

- A. Repair pavement cut during construction.
- B. Use a cutting machine to make pavement cuts. Make straight, parallel lines to conform to the detailed drawings.
- C. Provide temporary patches as required in order to properly allow free flow of traffic. Use cold mix asphalt for temporary patches, 3 inches deep furnished flush with adjoining pavement. Use binder course patches with concrete.

- D. Provide proper sign, signals and warnings to traffic to prevent risk of injury to motorists.

3.4 TESTS

- A. An air test shall be made by forcing air into the system until there is a uniform gauge pressure of 5 pounds per square inch (psi) (34.5 kPa) or sufficient to balance a 10-inch (254 mm) column of mercury. This pressure shall be held for a test period of at least 15 minutes. Any adjustments to the test pressure required because of changes in ambient temperature or the seating of gaskets shall be made prior to the beginning of the test period.

3.5 SILT RETENTION BARRIERS

- A. Provide material for silt retention barriers as detailed.

3.6 TEMPORARY SURFACE DRAINAGE

- A. Leave openings at subgrade in drainage structures for surface drainage.

3.7 DETENTION FACILITIES

- A. Install detention facilities including walls, outlet structures, and rip rap as shown on the drawings.

3.8 CLEAN-UP

- A. Upon completion of work, remove forms, equipment, protective covering, and rubbish from the premises. Carefully clean interior of sewers of dirt, rubbish and surplus mortar and leave clean and smooth upon completion of contract.

END OF SECTION 33 41 20

ALLOWANCES

PART 1 – GENERAL

- A. The Contractor shall include in his lump sum bid proposal the allowances stated herein. These allowances shall cover manufactured equipment or services that will be provided to the contractor by others. The contractor shall cause the work covered by these allowances to be provided by such suppliers as the Owner may select. The Contractor's cost for handling, coordinating and any other costs that are necessary to complete these items but not specifically covered in the allowance shall be included in the bid item of the Contractor's choice. The final amount of any allowance item listed herein shall be adjusted accordingly by change order to reflect actual cost.

PART 2 – PRODUCT

- A. Allowances shall be utilized to incorporate cost changes for any additional authorized work into the scope of work up to the amount budgeted above. Contract change orders shall be enforced for contract changes over and above this amount. These Allowances shall authorize the Contractor to perform additions to work, but the Contractor shall perform no work until written authorization has been delivered to the Contractor by the Owner. Contractor should not expect that any Allowances will be issued; Allowances shall be issued at the discretion of the Owner only.

The value of any work covered by a Allowances shall be determined in one of the following ways:

1. Where the work involved is covered by unit prices contained in the Contract Documents, by application of unit prices to the quantities of the item involved (subject to the provisions of General Conditions, Article 77, paragraph 11.03 inclusive).
2. By mutual acceptance of a lump sum by Contractor and the Owner
3. On the basis of the cost of the work plus a Contractor's Fee for overhead and profit. This basis shall be as established for Change Orders in General Conditions, paragraph 12.01.

PART 3 – EXECUTION

- A. Amounts stated shall include all taxes, coordination and handling that may be required to provide the equipment to the owner. Owner may choose to delay the purchase of equipment to the end of the contract.

END OF SECTION

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